The National Locksmith

The National Locksmith®

March 1993

Inside:
Locksmith Tool Review
Security Certificate Test Section

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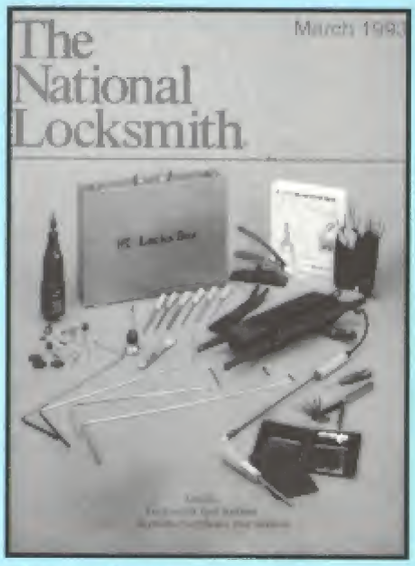

On The Cover
This month's cover features products manufactured by AAA Products Int'l.; Dremel Tools; ESP; High Tech Tools; HPC, Inc.; and Pro-Lok.

Click on the article you wish to read

Departments

The Audit Bureau

The National Publishing Company

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Commentary

Announcing The Security Certificate Program!

The month we have all been waiting for has finally arrived. This issue of *The National Locksmith* contains the first of our new Security Certificate Exam Sections. We have received many calls at the office expressing interest in the program. Now is your chance to participate! Turn to the special center section, follow the easy directions, and take the tests that interest you. Then, simply return the tests according to instructions.

We are very excited to bring you this unique, low-cost educational opportunity. As you may already know, there is only one catch. You must have your own, personal subscription to the magazine. If yours is the name on the mailing label, then you are eligible to participate. If you usually read someone else's copy of *The National Locksmith*, then now is the time to invest a couple of dollars to take your own copy.

Good luck to all those locksmiths who decide to test their knowledge with our Security Certificate Program!

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I have another piece of good news to announce this month. On February 5, 1993, my wife, Colleen, delivered our third child, a boy whom we have named William Benjamin Charles Goldberg. (Isn't that a mouthful?!) William joins our family along with Samantha, age four and Faye, age two. As you can imagine, things have been rather hectic at our house. Pretty soon I even hope to start sleeping again!

****

Recently I received a call from a locksmith located in a small town. Her problem was the following. A nearby locksmith is stamping "Do Not Duplicate" on all the keys which he makes for his customers. The way I was told the story, the customers were not requesting the other locksmith to do this. He just stamped this on every key as a matter of routine.

The woman calling me was concerned because people were later coming to her, asking her to make a duplicate for them. However, she was unsure of what to do because the keys had been stamped DND.

I don't think this sort of thing used to happen too much if you go back in years. In the good old days, a locksmith never stamped DND on a key unless he was requested to do so by the property owner. Moreover, back then a locksmith wouldn't even think of copying a DND for anybody just coming in off the street. I guess things are more complicated today.

First of all, I do not think it is ethical for a locksmith to stamp a key unless he is specifically requested to do so by the customer. To stamp DND on a key simply to try and keep all the business for yourself is not ethical. Also, it won't work.

Of course, I believe the owner of a property should have the right to copy his or her key at will. Therefore, I advised the locksmith who called me to go ahead and make the duplicates. However, I suggested that she carefully check identification to insure the customer was really the owner of the property. This will protect her if, by chance, the DND keys were being used by a TV sting operation.

The moral of the story is that Do Not Duplicate doesn't always mean Do Not Duplicate!

Marc Goldberg

Editor/Publisher

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

New Association Forms In Rhode Island

Dear Marc:

I would like to inform you that there is a Locksmith Association in the State of Rhode Island, called the Locksmith Association of Rhode Island.

Please inform your readers of this association.

The address for the Locksmith Association of Rhode Island is, P.O. Box 9181, Providence, RI 02940-9181. The President is Tom Pallotta from Ocean State Lock & Safe, Inc. (401) 944-9977.)

Merrill Torgan
Locksmith Association of R.I.

Locksmithing Designated As Trade In Alberta, Canada

Dear Marc:

At the end of 1990, Locksmithing was officially designated as a trade in Alberta. This is a precedent in North America, and the Professional Locksmiths Association of Alberta (PLAA) was instrumental in lobbying our government over the past ten years for Trade Certification.

We since found, however that the project was not yet out of our hands. For two years now, our Ministry of Advanced Education has resisted pressure to make the apprenticeship program available, citing reasons of funding for the delay. This has made it impossible for locksmiths in Alberta to challenge the new locksmith journeyman examination, since the government department responsible for designating the trade (Alberta Career Development) has been reluctant to launch the trade, i.e.; invite qualified locksmiths to become journeymen, when there would still be no mechanism in place for others to follow. This situation was further complicated by provincial legislation which imposes a deadline for challenging the journeyman examination. If the deadline is missed for any reason (even that of the exam not being made available), the above-mentioned qualified locksmiths would have to first complete all or part of the apprenticeship program before becoming journeyman locksmiths. This, of course, would create a situation where there are no journeymen to sponsor apprentice locksmiths.

The PLAA Trade Certification Committee has adopted the goal of ensuring an apprenticeship program is in operation by the end of 1993, and we have managed to convince our government of our intent to the degree that they have decided to launch the trade on January 1, 1993. We will have Government Certified Journymen locksmiths in Alberta by March or April, 1993.

The PLAA believes locksmith associations all over North America are watching us as we break new ground in a quest common to all locksmiths. We are happy and proud to have been able to achieve what we have so far, and are confident in our ability to complete the task.

Professional Locksmith Association
Of Alberta, Canada

Security Certificate Program Received With Enthusiasm

Dear Marc:

Thank you for starting the new Security Certificate Program. I will be taking the tests as you publish them and will work toward completing my certificate It will be very nice to have this certificate on my wall at the shop for the customers to see. And thanks also for making the cost so low!

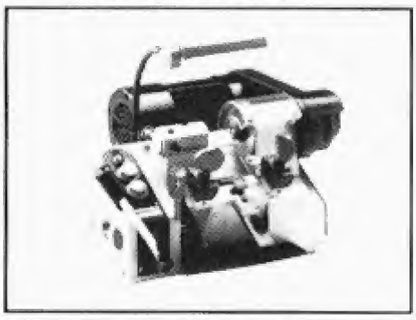
Joe Haven
California

Editor's Note: The first set of three exams for the Security Certificate Program are printed in this issue. The cost is only $2 for one exam, $3 for two or $4 for all three. The topics are General Security, Automotive Security and Electronic Security. We urge all locksmiths to take advantage of this opportunity! (Remember, you must have your own personal subscription to participate.)

Enter the 1993 Technitips Contest

$$$ Thousands and thousands in cash and prizes! $$$

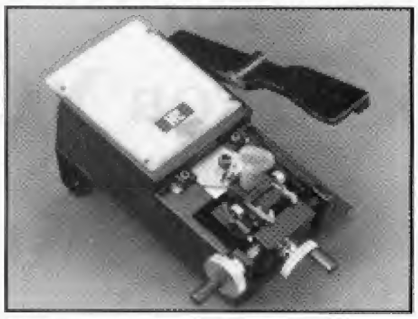
Silca's Bravo USA



First Prize

Locksmith designed, the Silca Bravo USA is a quality semi-automatic duplicator. Four-way jaws hold even the smallest keys as this. One of the most accurate key machines on the market.

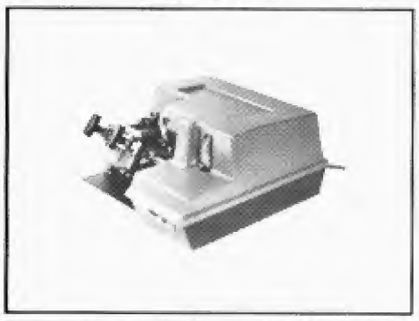
HPC's Punch Machine™



Second Prize

The Punch Machine™ (1200PCH) is HPC's newest addition to the 1200 series key machines. It works on the same principle as the 1200CM, making it quite versatile. It is also very accurate and completely portable.

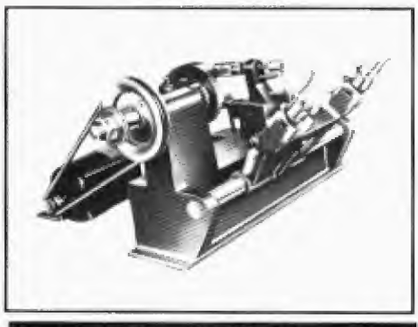
ESP 5000



Third Prize

The model 5000 key machine can be used for manual cutting or, with the flip of a switch, it will cut keys automatically. It is designed to accommodate large head keys such as hotel and foreign auto blanks.

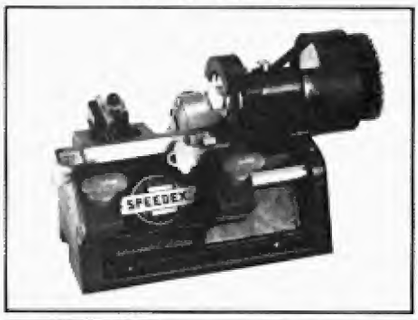
Belsaw 200



Fourth Prize

Duplicate, cut by code, cut flat steel keys. Complete machine with motor, three cutters, guides, and instructions. Built-in micrometer.

HPC 9120



Fifth Prize

HPC's most compact key cutting machine features reversible jaws. Double-sided copy dog cuts flat steel and safety deposit keys and has softy brush. Excellent versatile machine.

$100 Cash & Flat Rate Manual

Sixth Prize

$100.00 in cash will brighten your day! So will the *Flat Rate Manual for Locksmiths*. The manual will help you price your services for profit. You won't ever have to guess how to price again.

**************** Code Books From *The National Locksmith* ****************

General Code Book Set (NGCB)

Seventh Prize

These three books contain 450,000 codes covering domestic lock and automobile codes.

Padlock Code Book Set (NPCB)

Eighth Prize

These three volumes offer 462,000 covering Dudley, American (Junkune), Master and Yale.

Foreign Code Book Set (NFCB)

Ninth Prize

This two volume set holds 432,000 codes for the complete variety of foreign codes, from Alpha Romeo to Yugo.

Technitips

Helpful Hints from Fellow Locksmiths

Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Robert Sieveking

March's Best Tip

A simple method of opening a Sentry safe, using the two wheel and ten change position driver is the subject of this Technitip. A customer that has changed the combination of his Sentry safe, may still have the original combination instruction sheet, but has changed the combination and not be able to recall the new combination. Because of the design of the lock, it is very easy to determine all the possible combinations. Most times a combination is changed by simply moving a screw (drive pin) to one of ten possible positions in the drive cam. This Technitip will *not* work if the combination wheels have been reversed or switched.

Table one shows the possible combinations for a Sentry safe that had an original combination of: 25 - 57 - 42. As you can see, the combination has not really "changed." It has more accurately been "pushed" 10 numbers with each "change of position" of the drive screw.

If you have any past combination, simply extend the combination in multiples of 10 to find all the possible combinations, then work through them. One of the combinations will open the safe.

These Prizes Awarded Each Month!

All-Lock A-7000 VATS Decoder
HPC Pistolpick
Silca Rubberhead Keyblanks (100 blanks)
ESP PR-13 Professional Lock Pick Set
Sieveking Products EZ-Pull GM Wheel Puller
Fort Lock Backer Board Display Panel
Submit your tip and win!

How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to The National Locksmith. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to:Robert Sieveking, Technitips' Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, Il 60107.

Tips submitted to other industry publications will **not be eligible**! So get busy and send in your tips today.You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1992? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you $25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker and decal. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win $50.00 in cash as well as $35.00 in Locksmith Bucks! Plus you will receive a Bonded Locksmith bumper sticker, decal and a Locksmith Cap. Plus, you may win one of the annual prizes.

25	57	42
35	67	52
45	77	62
55	87	72
65	97	82
75	07	92
85	17	02
95	27	12
5	37	22
15	47	32

Bill Hatfield
Arkansas

Editors Note: If any reader has a list of factory combinations (not just multiples as you see here) or possible combinations for specific models of the Sentry safes, please send them in. I'm sure that, because the number of possible combinations is very limited, trial combinations could be a good alternative to drilling or manipulation.

****

All-Lock VATS Decoder Winner

Here's a Technitip that will save you a little work code cutting a set of try-out keys for the Saturn autos. If you made a set of tryout keys for the new double sided Chrysler system, this Tip is for you. The Saturn keyway is the reverse of the Chrysler keyway. Duplicate your Chrysler set onto Saturn blanks to make a set of Saturn try-out keys. The lock systems are otherwise identical. Follow all the same rules for using the tryout keys, as you would for making a Chrysler key.

R. Lazich
Wisconsin

****

HPC Pistolpick Winner

When I have a problem with a broken key in a Toyota style ignition cylinder, one that can not be easily removed by normal key extraction methods, I find the following to be a quick and fairly easy method. In most cases the plug can be turned by using the remaining half of the customers key, or by picking. Rotate the plug to the accessory position and depress the plug retainer. This will allow the cylinder to be removed. With the cylinder out of the column, and on the bench, the key extraction can be completed in one of two ways. Many times, if you bring the ignition down smartly on a nonmarring hard rubber pad, the broken piece of the key will be jarred to the front of the keyway and be much easier to remove with normal extractor hooks or tweezers. If after a few raps on the bench, you find that the key will not move forward to the front of the plug, the second method can be used. Carefully drill a hole at the rear of the plug. A 1/16" hole, centered on the plug, will allow a piece of wire to be pushed into the rear of the plug to force the broken key out the front. Lift any wafers that fall in front of the broken key with a pick, as you push it out the front. The drilled hole should not affect the operation of the cylinder, if done properly. Make a new key for the lock cylinder, lubricate and check the cylinder for proper operation, and re-install it into the lock housing. This method can save you a lot of time, when it is possible to remove the cylinder. These same methods can be used on a number of foreign and domestic cylinders.

Bill Cochran
Wisconsin

****

Silca Keyblanks Winner

For those locksmiths that originate keys to code with the Foley 200 key machine and spacer keys, this Technitip will save time. Instead of trying to look up the cut depths every time you make a key, stamp the micrometer depths on the head of the spacer key, so they can be seen when the spacer key is in the machine. There are only three or four depths in most foreign keys. Use small number stamps or an engraving pencil. This will save time wasted referring to the depth and space books every time you make a GM, Nissan, Honda, or Toyota key by code.

Tom O' Neil
Texas

****

ESP Pickset Winner

This Technitip is for the new locksmith, or one that is still working out of his car. In Louisiana, there are more nice days than rainy days, and no real winter, so fair weather key cutting is a reasonable option. I have a Foley Belsaw machine, which I have equipped with both the 12VDC and 120VDC motors. When duplicating or code cutting keys, I have no problem with setting the key machine on the top of the car or rear deck since I came up with the no slip pad. The large thick rubber non slip pad, normally used to reduce the noise and skid proof a typewriter is both heavy and durable enough to make the ideal pad for my key machine. The key machine is mounted to a piece of plywood, and the pad is glued to the bottom of the plywood. The non slip pad will not slide off or scratch the car.

I hope this Technitip will help someone like myself, on the way up. I'm not giving up.

Robin Robert
Louisiana

****

E-Z Pull GM Wheel Puller Winner

The Mitsubishi Fuso trucks are very common in my area. Many are owned by the truck rental companies. Some use the Dodge Colt DC3 key (X121). Some newer trucks have an FU2 key. The code series is H1 to H5143 for the DC3 key, and 8100 to 9113 for the FU2 key. It seems that the code numbers do not make any sense with the available codes, and the door locks are too sloppy to give a working key for the ignition when impressioning. There are only seven wafers in the door locks. The ignition uses eight wafers.

The best method I have found, to originate a key to this vehicle is to remove the ignition cylinder and make the key by disassembly. Remove the plastic column shroud, to reveal the lock housing. The ignition cylinder is held in place by two retaining pins. Remove the retaining pins to free the lock cylinder. Remove and disassemble the lock cylinder to make the key. This key will operate all locks. The whole procedure takes only about twenty minutes.

H.L. Whitford
California

****

Fort Lock Display Panel Winner

Because of some difficulties I had recently, servicing an Auth mail box lock, I felt that this Technitip would serve to help a fellow locksmith. The cam locks used in the Auth mail box nests are made by the E.S.P. lock company. They use the 1003M keyway, and are five pin locks. The depth and

space information is the same as the Hudson small pin locks that they replace. The special design of these cylinders prevent the plug from being "shimmed" or removed by simply removing the lock cam . This is a fine feature, but it makes servicing the cylinder a little tricky. In order to shim the cylinder and remove the plug, it is first necessary to remove the plug retaining pin. The sixth, or rear, pin hole of the cylinder contains the plug retaining pin. This is not a combinating pin, but a solid one piece retaining pin that engages a groove in the plug, preventing the plug from being removed when the cam is off. If you are recombinating these cylinders, or making a key by disassembly, you will need to remove this pin. Pry up the rear of the spring retainer, as you see in illustration two, to reveal the plug retaining pin. The pin can be "rapped" out easily. Replace the pin and restake the retainer after servicing the cylinder.

Auth Mail box lock?

Pry up the spring retainer to reveal the plug retaining pin.

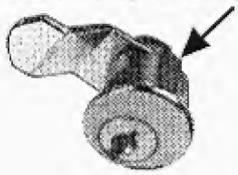


Illustration 2

Service these cylinders by removing the spring retainer, when recombinating them. The top and bottom pin lengths are matched, much like Ford and Chrysler cylinders.

William Weaver
Georgia

****

Every locksmith who has been in business for any length of time, in an area where there are competing locksmith companies has experienced or will certainly experience this problem sooner or later. The locksmith is called out to rekey a house or business, to lock out a former employee, girlfriend / boyfriend, or spouse. Later in the day, a similar call comes in, to his or another shop, to have the same property opened and rekeyed. The locksmith is met by "the other half " of the disputing couple, and informed that "this is my home" open it and change the locks. The question of having photo "I.D." which indicates the correct address and name of the person requesting the work is satisfied by proper identification. The locksmith performs his work and leaves.

Without going into detail concerning all the possibilities and problems, I offer this small solution. Illustration three is a representation of the sign I have had printed. After rekeying a business or apartment, where the customer is concerned about someone "re-entering" the premises without proper authority, I offer my warning signs as a premium. The sign has a warning, concerning the fact that the property has been rekeyed. There is a date, which establishes the date of the rekey. There is also a space for the name of the person to be contacted, and their phone number. At the bottom is the locksmith shop name. The signs are printed on "day glo" colored paper for the greatest visibility. Filled out *by the locksmith* and placed conspicuously inside a window near the door being serviced, they should be visible from outside, but not removable without opening the building.

This idea could save a fellow

Illustration 3

locksmith from some embarrassment or even a liability claim. I hope this idea serves another locksmith as well as it has helped me.

Willard D. Ellis
Texas

****

Back in '85, there was an article, that described how to make your own set of try-out keys for the then new 10 wafer ford locks. I made a set of those try-out keys, over H54 blanks, and have had good success in using them to make first keys for the 10 wafer locks. Because of the change in length to the longer H60 key, (Lincoln autos '91+) the old try-out set would not enter the newer ignition locks far enough to operate all the wafers. I was faced with either making or buying a new set of try-out keys, or duplicating my old set over the H60 blank. After some consideration, I came up with a third option, that was far less expensive and less time consuming. As you can see in illustration four, the head of the H54 key blank can be milled away to allow the older style key to enter the ignition locks properly. Use the H60 blank as a pattern, and duplicate over the head portion of the key. The result is an H54 blank with the length of an H60 key. The try-out keys will now enter and operate both the original and the 1991+ cylinders.

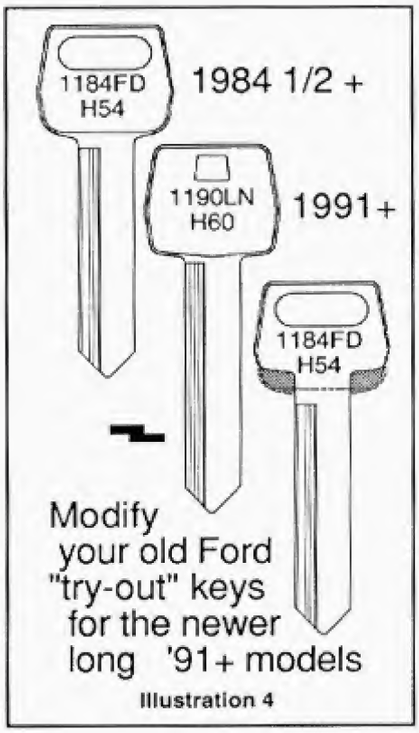


Illustration 4

In some cases, the milling of the H54 keys may not allow them to enter the new cylinders far enough, even with the head cut back as you see in the illustration. Some manufacturers blanks simply have longer milling than others. Check this with the first few keys you modify, to insure that they will work before wasting your time modifying keys with short milling. Good Luck.

Jerry Robinson
Illinois

****

This Technitip concerns a method I have used to open a thin wall fire proof safe. The method is relatively safe, as the drill does not enter the lock case.

The other day, a customer brought me a tall slender safe, up from New York. We unloaded it and uprighted it on the drive, one terribly cold February morning. After turning the dial and listening to the safe lock, I quickly determined that it was a gravity fence lock. The Yale dial, and familiar drop-in between 1 and 4 told me that it was a Yale OB type lock. While sitting on a very cold milk crate, I decided to go for the "MCO" solution.

I reached for my drill-motor. This particular opening method is good for any round case lock. Drill the Hall lock at about 9 o'clock and the Yale OB, Mosler HE, and Diebold locks at about

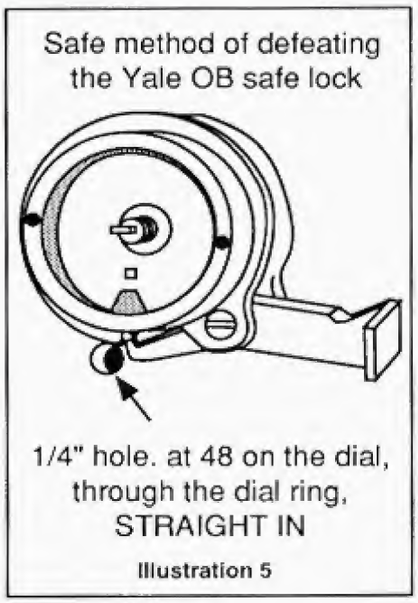


Illustration 5

6 o'clock. Drilling through the dial ring is a little touchy, but paint repairs are much cleaner than drilling outside the dial ring. Under-dial drilling is not practical. The Tip here is that we are not drilling into or damaging the lock case or risking damage to the wheel pack.

Drill a 1/4" hole, at 48 on the dial, through the dial ring, straight in. This will put the point of the drill, as you can see in illustration five, just to the right of the heel of the drop lever or gravity fence. (The lock is shown from inside the door.) Insert a bent wire into the hole, and pry the drop lever out of the gap in the case of the OB lock. There is not enough room to view the wheel pack with the lever in the way.

With the lever pried down, apply turning torque to the opening handle of the safe, to bind and hold the lever out of the lock case. Use a "bungee" cord on the safe handle to maintain the torque on the bolt bar. Insert a 90 degree side view scope into your drilled hole, and align the wheel gates under the fence. You should have no problem seeing the gates, with the fence held up. When the gates have all been aligned, release the "bungee" cord and the fence will drop into the gates. Open the safe .

This method will also work with the Hall Safes, if you drill a little below the nine o'clock position, at about 73. The bar will most likely obstruct your view, but you can make a thin flat steel feeler. Somewhat like a large "hook pick" to feel the wheel gates as the dial is turned. Many thin door fire safes can

Continued on page 88

Newsmakers

New Products and Industry News

Get Your Personalized Security Certificate

In this issue, *The National Locksmith* publishes the first three exams for the Security Certificate Program. All locksmiths who have their own, personal subscription to the magazine are eligible to participate. Simply study the three test articles printed in the January, February and this March 1993 issues. The three test topics include General Security, Automotive Security and Electronic Security.

Fill out the test or tests which interest you, and you will earn a personalized Certificate with Gold Seals to be sent to you for each test that you pass. The test fee is $2 for one test, $3 for two tests of $4 for three tests. There is a one-time charge of $5 for the personalized Certificate. Please see the tests published in this issue for further details.

Each issue of *The National Locksmith* will include articles on the test topics. Exams will be printed in this issue as well as the June, September and December issues. If you do not currently have your own personal subscription, please fill out and return the application form printed in the front of this magazine.

For FREE Information
Circle 324 on Rapid Reply

The S.O.S. Program By Locksoft

Locksoft, Inc. announces a new program called S.O.S. The Safe Opening Simulator is the first educational software for the safeman and locksmith. It has been designed to teach safe identification, and techniques for trouble shooting a lock that will not open with the combination, or if the combination is lost.

The standard safe library comes with 33 safes. You will learn to identify them by manufacturer, model, UL rating, lock brand, lock model, class and mounting. A different safe is displayed at random and may have any one of six reasons why it won't open.

You must trouble shoot the lock via the on-screen dial, determine the problem, and open the safe. It is an animated program which uses sound to replace the feel that you would normally have with a real lock. Available tools include a hammer, drill, sidelight, straight light and explosives.

Step by step help is available for opening the lock.

For FREE Information
Circle 325 on Rapid Reply

Ultra-Flexible Light By Steelman

Announcing the brand new model #15156 Ultra-Flexible Bend-A-Light with new EZ-ON switch, chrome handle, krypton bulb, and 15" ultra flexible co-ax shaft.

This exciting new model is far more durable due to extreme flexibility of the co-ax shaft, and the new chrome handle that strengthens the handle.

The EZ-ON switch makes it a snap to install and remove batteries.

The special locksmith design makes the new #15156 perfect for car opening procedures. The krypton bulb and 15" ultra flexible co-ax shaft probes deep into the door and provides a brilliant light.

For FREE Information
Circle 326 on Rapid Reply

Continued on page 16

Continued from page 14

Javelin Introduces Quest Plus

Javelin's Quest Plus is a suitable choice for mid-size security/surveillance system applications. CCTV surveillance and control supervised alarm point monitoring and auxiliary device control are integrated using the most advanced man/machine interface currently available. A variety of international languages are available to further simplify system operation and programming.

Quest Plus offers simple control of all system operating and programming functions using on-screen interactive menus with click and run pick lists.

For FREE Information
Circle 327 on Rapid Reply

DoorKing's Econo-King Telephone Entry System

DoorKing's Model 1810 "Econo-King" Telephone Entry System combines the phone, hood, light and directory into one compact unit. The built-in lighting makes the system easy to use, even at night. The system is loaded with standard features, like hands free operation, remote programming, programmable entry codes, and multiple systems can share the same line. the 1810 includes built-in provision for a postal lock, and uses full duplex circuitry, which allows for crisp and clear two way communication.

For FREE Information
Circle 328 on Rapid Reply

AutoPage RF-30 Vehicle Security System

AutoPage introduces the new RF-30. This theft deterrent system is designed for the value-minded customer, who needs a dependable feature-oriented product at an affordable price.

The AutoPage RF-30 is loaded with many easy-to-use convenience features that are a result of a new programmable microprocessor. Using a programmable code reading system (half million codes), the RF-30 can learn up to four remote transmitters at one time. Through a simple programming procedure a new transmitter can be programmed and the old one made obsolete and ineffective.

For FREE Information
Circle 329 on Rapid Reply

Von Duprin Vertical Rod Device

Von Duprin now offers concealed vertical rod exit devices with latch sets designed for hollow metal fire doors up to 10' 0" high, as well as for doors with standard 3/4" undercut.

The new latch sets are specially engineered for push-pad exit devices, designated Series 3348-F, 3548-F, 9848-F, and 9948-F. They are UL-listed for application on pairs of doors up to 10' 0" , either vertical rod by vertical rod or vertical rod by mortise lock device.

Also available separately are UL-listed latch sets for retrofitting on A-labeled doors 8' 0" or less in height, with standard 3/4" undercut. The latches are for use with Von Duprin's Series 3347-F, 3547-F, 9847-F, and 9947-F concealed vertical rod exit devices.

For FREE Information
Circle 330 on Rapid Reply

New Keyed Leversets Available From Master

Two new leversets from Master Lock meet the ADA Act accessibility requirements and are rated Grade 2, Light Commercial. The graceful, sweeping arc of the Cirrus™ and the sleek, simple lines of the LaSalle™ keyed leversets add sophisticated touches of elegance to any home.

Both leversets feature: exclusive, "hands-free" mounting, which frees both hands to secure the tie screws, a massive inner chassis and ball-bearing locking, for top security, and a full lifetime warranty The unique design allows cylinders to be exchanged to match Kwikset, Schlage, Weiser, National or Dexter.

For FREE Information
Circle 331 on Rapid Reply

Corby 6100 Programmable Keypad

The new 6100 Series Programmable Keypad from Corby Industries, Inc. provides an array of sophisticated access control features at an unbelievably low price. Operating one door (or other relay controlled device) for up to 36 people, it can be programmed, from the keypad, using a three to six digit code.

All inputs can be assigned to any combination of the two available outputs: a main relay rated at 5 amps, or to the auxiliary output. The built-in relay can switch power to a door lock, arm/disarm alarm systems., shunt alarm contacts or open an automatic garage door.

For FREE Information
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SecureKey™ Key Control Software

Management Systems Corporation (MSC), developers of Jagware Facility Management Software, announce the release of SecureKey™. SecureKey™ is a state-of-the-art computerized key and lock management system that provides instant access to key and lock records. It quickly shows the relationship of specific keys, keyholders, locks, door and keyset numbers. SecureKey's pull-down menus and on-screen help prompts make operation a snap — even for the novice computer operator.

For FREE Information
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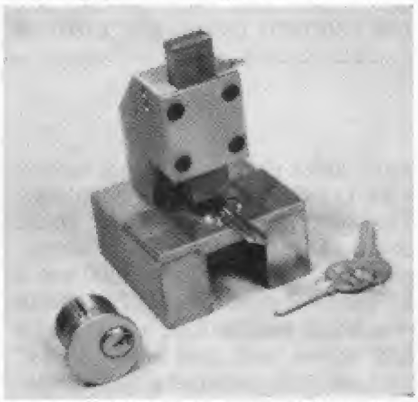
The Accumark I Stamping Block

The Accumark I stamping block is a simple to use fixture that can be mounted to the workbench or sit on the shop counter. With the plate installed, keyblanks are inserted onto the self-aligning pin that aligns the head for

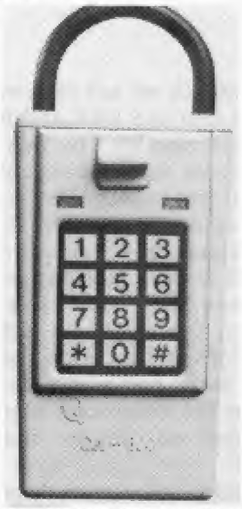


imprint. With a hammer blow, the custom message is imprinted into the head of the keyblank. Removing the plate opens a receiving hole for inserting a mortise cylinder. The block permanently imprints the locksmith's company name and address.

For FREE Information
Circle 335 on Rapid Reply

Seqwill CA-300 Lock Box

The Seqwill CA-300 safe-key electronic lock box permits you to control and track access in advance and protects property with keyless convenience and security. Powered by a lithium battery that requires no charging, the CA-300 can last over five years while operating in temperatures ranging from -40 to +145 degrees Fahrenheit.



For FREE Information
Circle 334 on Rapid Reply

Test Article #7
General Security
To be tested in March 1993 issue.
Details in insert in front of issue.

Yale Mortise Lock

"This article is part of our Security Certificate Program. In the current issue, the content will be tested."

This month we are reviewing the Yale mortise lock and its new ADA conversion kit. The Yale lock is very similar to the Sargent lock, reviewed last month. Despite their similar appearance, however, Yale specifications and dimensions vary from part to part. Interchange is not recommended. Yale has been producing this steel case lock since 1981. Before this date, all Yale mortise locks had a cast iron case. Parts for the older cast iron cased locks are no longer made or available.

Currently Yale carries three series or lines of mortise units; the 4600, 8600, and 8700. The 4600 is built for 1-3/8" thick doors and uses a narrow 8"x1-1/16" armor plate (faceplate). The 8600 is built for 1-3/4" thick doors and uses an 8"x1-1/4" armor plate. Both the 4600 and 8600 use a 1" throw deadbolt (on functions requiring deadbolts), a one piece 5/8" throw latch, and have a 2-3/4" backset. Both units use a split spindle with spindle dimensions for knob trim at 5/16" standard or 3/8" to order. Lever spindle dimensions are 3/8". Both inside and outside spindles are the same dimension.

The 8700 is built for 1-3/4" doors and uses an 8"x1-1/4" armor plate. It uses a 1" throw deadbolt when needed. The biggest difference between this model and the two previously stated is that it has a two piece 3/4" anti-friction latch. Knob and lever spindle dimensions and backset are identical to the 4600 and 8600.

The only major changes that need mention is the latch construction on the 8700 series. Pre 1983 the anti-friction lever of the latch was attached to the outside of the case or case cover using a pin. Post 1983 this lever was redesigned; the pin has been removed and the anti-friction lever now seats within a slot in the case or case cover. If an older version needs repair, the unit can be updated

Continued on page 20

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by installing the new style latch and new style faceplate.

A mortise lock catalog is available from local Yale distributors or directly from Yale.

Yale is another company that has responded to the Americans with Disabilities Act with an easy to install conversion kit, part #87FL (*see illustration 1*). The kit includes 10 components to make the conversion. An interesting inclusion in this kit is a small piece that looks very similar to a clover cam. This is the fire stop lever.

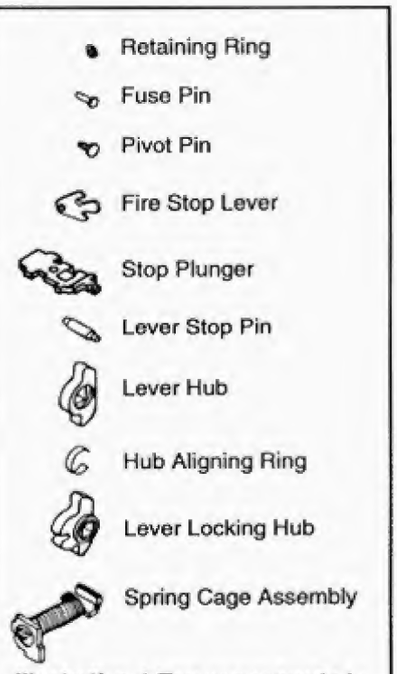


Illustration 1-Ten components to the Yale ADA conversion kit.

The purpose of this piece is to stop the lever from retracting the latch in fires where temperatures exceed 700°F. The reasoning behind this feature is that the door may be easily and unnecessarily opened should debris from the ceiling or vicinity fall on the lever during a fire. Disabling the lever at these temperatures is a UL requirement for fire rated hardware. Manufacturers disable the lever using varying methods. Some use a fusible spindle. Yale and Sargent use this small fire stop lever or cam. As seen in illustration two, there are two pins that are connected to the lever, one is a stainless steel pivot, the other a lead fuse pin. The fuse pin is designed to melt at 700°F allowing

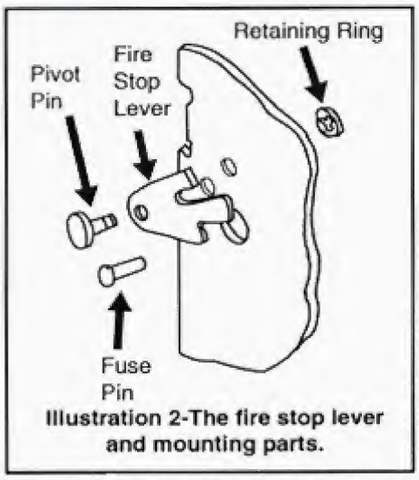


Illustration 2-The fire stop lever and mounting parts.

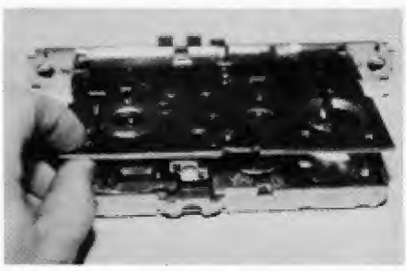
the gravity forced lever to drop, blocking the latch.

When making the conversion where fire rated equipment is used or needed, it is absolutely essential that this device be installed, and installed correctly.

To make the ADA conversion:

1. Remove the three screws holding the case cover on (*see photograph 3*).

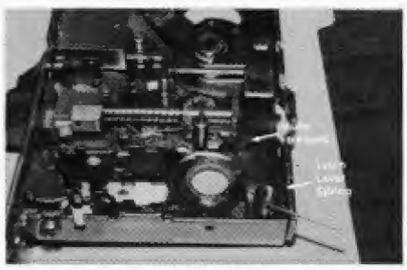
3. The steel case mortise lock has been used by Yale since 1981 and has experienced very few changes.



4. Carefully remove the cover.

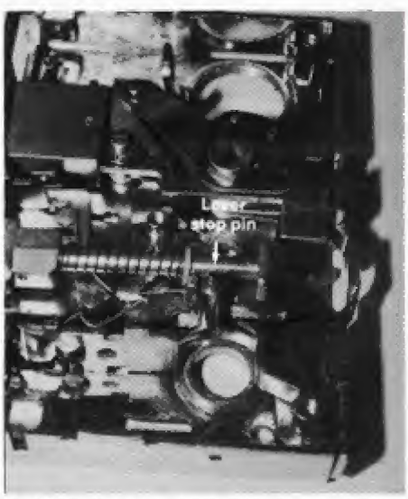
2. Slowly remove the cover; lifting from the back and sliding the front out from underneath the edge of the faceplate. There may be a shifting of the internal mechanisms (*see photograph 4*).

3. Remove the latch lever spring. This will eliminate pressure on the hubs. Remove the hubs, noting to what side of the case the locking hub is located (*see photograph 5*).



5. Remove the latch lever spring and the old hubs. Remember to which side of the case the locking hub is to be placed.

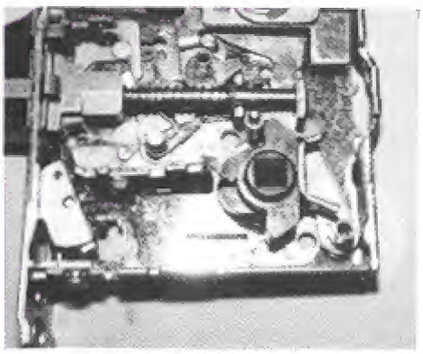
4. Insert the lever stop pin into the case. Make sure the square end goes in first. The slanted end helps align the pin with the hole in the case cover (*see photograph 6*).



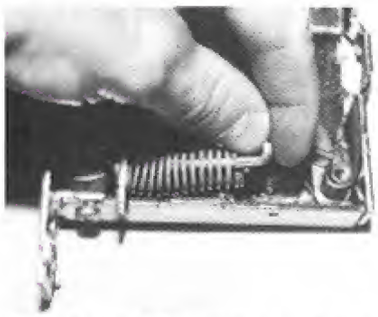
6. The lever stop pin is used to prevent the levers from being lifted or turned in an upward motion.

5. Replace the old hubs with the new lever hub, hub spacer and lever locking hub. Remember to place the lever locking hub to the correct side of the case (*see photograph 7*).

6. Install the spring cage assembly. Placing the assembly against the hubs first and then compressing the spring to insert the back into a slot in the case is usually



7. The new lever hubs installed and resting against the lever stop pin.



8. The trickiest part of the whole conversion is installing the spring cage assembly.

easiest (*see photograph 8*).

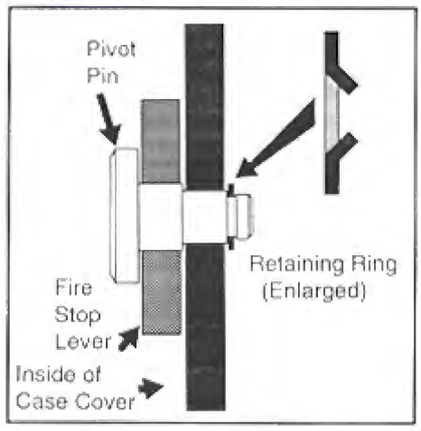
7. Replace the latch lever spring (*see photograph 5*).

8. Replace the old stop plunger with the new. The new plunger has been heat treated to accept the extra pressure exerted by a lever (*see illustration 9*).

9. Attach the fire stop lever to the inside of the case cover. Make sure the retaining ring is properly and securely pressed onto the pivot pin. The teeth on the retaining ring face

Stop Plunger

Illustration 9-While the shape of the stop plungers are identical, the new plunger has been hardened to accept the extra pressure associated with levers.



(At left) Illustration 10 - Install the fire stop lever to the inside of the case cover using the stainless steel pivot pin and retaining ring. Make sure that the retaining ring is pressed onto the pivot pin in the right direction.

away from the case cover (*see illustration 10*). Also, make sure that the fuse pin is in the correct cut out on the fire stop lever (*see illustration 11*). Use a pliers to crimp the end (*see photograph 12*).

10. Replace the case cover onto

Continued on page 24

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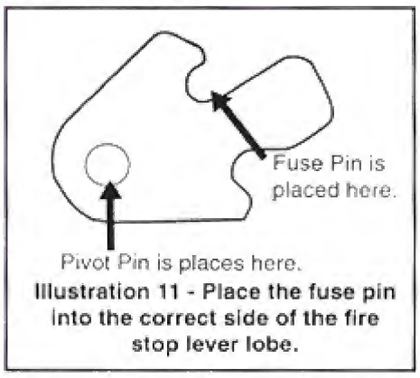
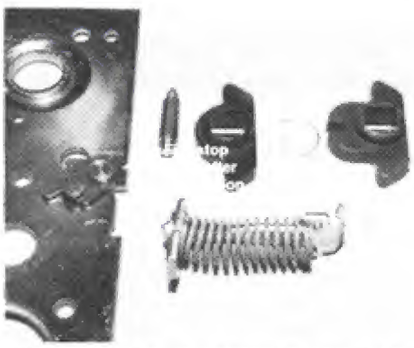


Illustration 11 - Place the fuse pin into the correct side of the fire stop lever lobe.

the case. Take your time aligning the components with the holes in the



12. This is a sample of the conversion kit less the stop plunger. The fire stop lever has already been assembled to the case cover.

cover using a pick or small screw driver. On the model for this article there is a lever attached to the inside of the case cover. One end of this lever must fit into the correct cut out area of the stop plunger or the cover will not close, and the lock will not operate correctly (*see photograph 13*).

13. This lever, found on the inside of the case cover, moves the stop plunger and front toggle button to the locked position when the deadbolt is thrown, and prevents unauthorized entry by manipulating the stop plunger to the unlocked position.

This lever is used to move and secure the stop plunger into the locked position when the deadbolt is thrown. It prevents anyone from trying to open the lock by using a small tool or wire to push the toggle button and stop plunger to the unlocked position.

A similar lever or cam is attached to the inside of the case itself. When the toggle button is in the locked position, depression of the guard bolt (deadlatch), prevents manipulation of the toggle button and stop plunger out of the locked position. When the guard bolt is at rest, the toggle button is free to move.

11. Check to make sure the lock operates correctly, checking that the locking hub was placed on the correct side of the case. §

Security Certificate Tests Located in Center Spread!

Test Article #8
Automotive Security
To be tested in March 1993 issue. Details in insert in front of issue.

Servicing Honda, Part II

"This article is part of our Security Certificate Program. In the current issue, the content will be tested."

Last month we covered opening and key generation for the Honda. This article covers ignition and door lock removal for Honda vehicles from 1986 to present. (Much of this material, specifically the ignition removal, includes vehicles going back to 1982. However, due to the number or transitions, and to remain as consistent as possible, we start with 1986.) As with the last article, we are not covering specific models. Instead, we are covering this servicing from a broader perspective.

Air Bags

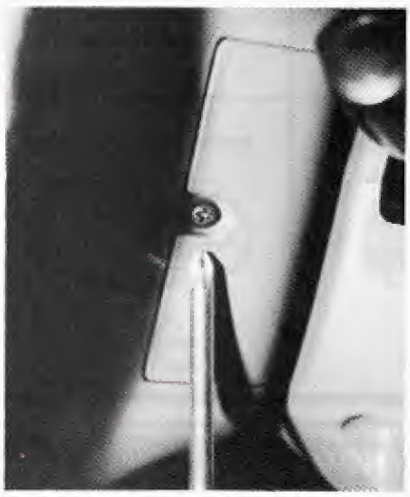
From 1992 and up all Honda vehicles have air bags. The letters "SRS", meaning supplemental restraint system, are embossed on the horn pad of all air bag equipped Hondas. Removing the air bag is not required for most ignition service concerning the locksmith. The proximity to the air bag and associated wiring while working on the ignition, however, does warrant disabling the SRS system before working on the ignition.

To disable the air bag system, first disconnect the battery ground cable from the battery (*see photograph 1*). All Honda vehicles with air bags have a power reserve unit that will deploy the air bag in the event of an accident that severs the battery from the rest of the car. Unlike many domestic vehicles, Honda states that there is no waiting period before air bag service, providing the following procedure is completed.

With the battery disconnected locate the small cover underneath the backside of the steering wheel. There are either one or two screws holding it in place, depending on the model. Remove the screw(s). (*See photograph 2.*)

Pull down and remove the cover. Two to three plastic clips hold it in place. Do not pry or they will break.

1. Disconnect the battery.



2. Remove the air bag connector cover found on the bottom, back side of the steering wheel.

The cover is sometimes stubborn, be persistent.

Removing the cover exposes a red shunting connector attached to the inside of the cover, and the yellow air bag connector inside the steering wheel (*see photograph 3*). Separate the yellow air bag connectors and put the red shunt connector onto the yellow air bag connector going up to the horn pad (the connector with the yellow warning tag attached) (*see photograph 4*). You're ready for ignition service.

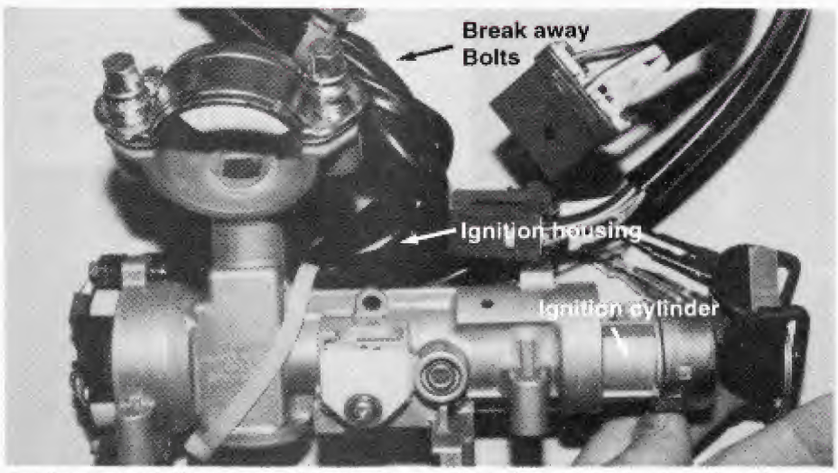
Ignition Removal

Typical of most imports, Honda

3. Removing the cover exposes the SRS connectors and connector shunt.

4. Place the shunt over the SRS connector. You're ready to service the ignition.

uses an ignition housing that clamps onto the column, with a cylinder that slips into the housing (*see photograph 5*). The housing is held to the column using two break away bolts. From 1984 and up all Honda models use ignition cylinders with push button retainers (Accord started in 1982, Prelude in 1983, and the Civic in 1984).

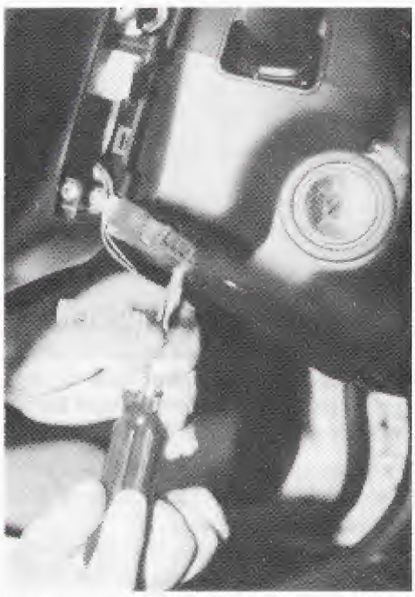


5. The typical Honda ignition is clamped to the column using break away bolts. The ignition cylinder slips into the ignition housing.

To date, all of the column shrouds for these years are two pieces (*see photograph 6*). Remove the screws from the bottom shroud to separate and remove the shroud halves. This will reveal the ignition housing. The break away bolts can be seen from the top. If ignition housing removal is necessary, try using a scratch awl first. Place the point of the awl on the edge of the bolt and tap with a hammer to reverse it out. Many times this is all it takes.

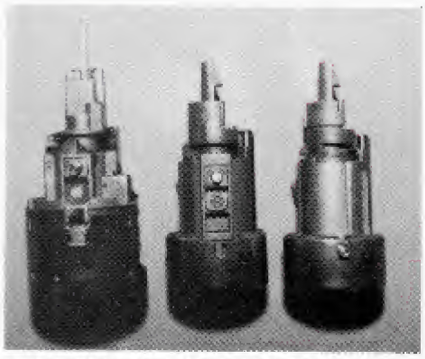
If this does not work, drill each screw with a small drill and use a reverse out to unscrew the bolts. It may be necessary to drop the column in order to reach the bolts with a drill. More often than not, however, only cylinder removal is necessary.

Earlier model push button retained cylinders had the retainer at the front of the cylinder. Later model years moved the retainer to the back of the cylinder. This was to make forcible removal of the ignition harder (*see photograph 7*).



6. Removing the screws from the bottom of the shroud, allow the two pieces to separate and be removed from the column area.

All in all, removal of the cylinder is identical for all push button retainer models with minor variations to retainer placement and electrical switches added to later model years.



7. Honda uses the same type of retaining pin, but has moved them from the front of the cylinder to the rear.

Two exceptions, the 1992 — 1993 Civic and 1992 — 1993 Accord EX wagon, will follow.

In short, to remove the cylinders, use a key or pick the plug to the "ON" position, marked with "II" and then back to the "ACCESSORY" position, marked with "I". At this point the key cannot be turned back to the "OFF" position, marked "0", without first pushing the key into the cylinder. Depress the retainer and remove the ignition. The retaining button is found at the top of the cylinder usually in line with either the "I" accessory marking or "II" ignition on marking on the cylinder facecap. The only variation will be the distance from the front of the facecap to the center of the retainer. This distance will range from 1/2" (on older models) to 1-1/2" (on later models).

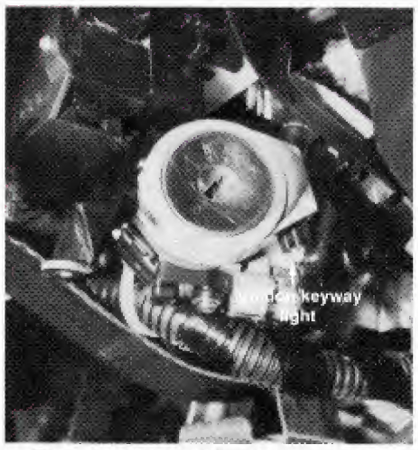
Later model Accords and Preludes, 1991 and up, include a shifter/key interlock switch, a lit keyway light and lens, a retaining screw, and a buzzer activator switch that must be removed first. Other than this, all cylinder removal from 1982 to 1993 is identical. So, to cover all bases, follow the removal of a cylinder from a 1993 Prelude.

Disable the air bag and remove the column shroud. Do not be scared by the mass of wiring harnesses surrounding the ignition cylinder. It is easier than it looks.

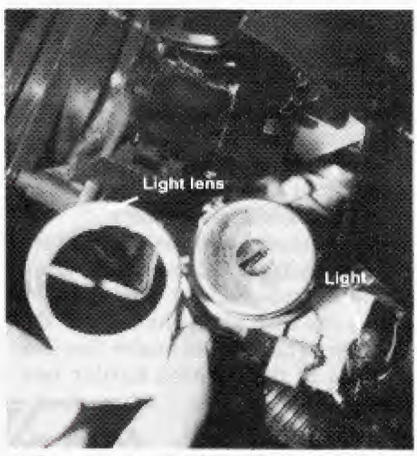
First, remove the lit keyway light. this is the small black connector with two wires, inserted in the white lens cover, found to the right side of the cylinder facecap (*see photograph 8*). Turn the black plug ninety degrees counter clockwise and the light can be pulled down out of the lens cover.

Next, gently twist and pull the lens light cover off. (*See photograph 9*).

With the lens removed, a small

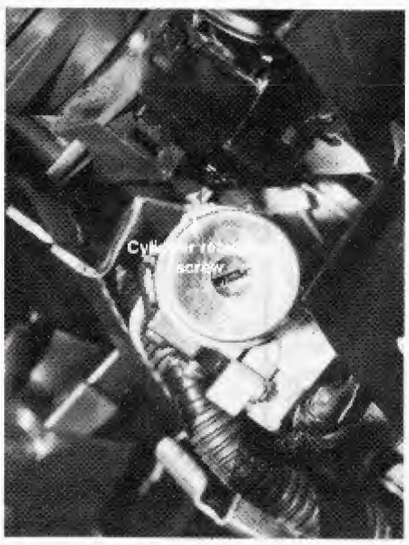


8. Remove the ignition keyway light.



9. Remove the light lens and lens cover.

phillips head screw is exposed at the top of the cylinder (*see photograph 10*). This screw retains the ignition cylinder in the housing and must be removed. Unless the housing is removed first, however, a screw driver



10. This small retaining screw is present on some models from '91 up.

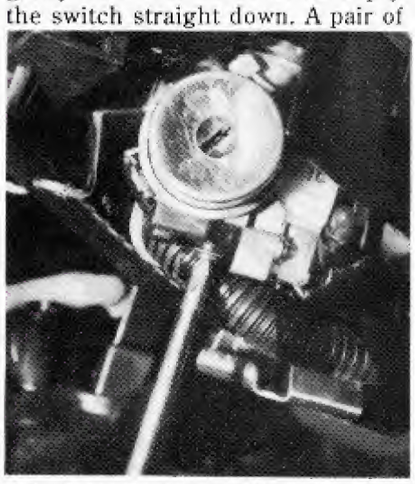
cannot be used to take the screw out.

Instead, use a small needle nose vice-grip to grab and turn the screw (*see photograph 11*). Remove the screw completely.

11. Because screwdriver will not fit, it is necessary to use a needle nose vice grip to remove the screw.

Next, remove the shifter interlock switch located underneath the cylinder. *This switch is black and present on automatic Hondas from 1991 and up only!* Hondas with manual transmission will not have this switch. A white plastic cover takes its place and does not need to be removed.

A single phillips head screw is first removed (*see photograph 12*). Then gently use a small screw driver to pry the switch straight down. A pair of



12. Remove the shifter interlock switch screw.

small plastic clips attaching the switch to the housing make prying necessary. Be gentle! (*See photograph 13*)

With the switch removed, use the key or pick the plug to the "ACCESSORY" position. Depress the retaining pin and pull out on the

Continued on page 30

Continued from page 28

13. Gently pry the switch down and away from the housing.

cylinder at the same time (*see photograph 14*).

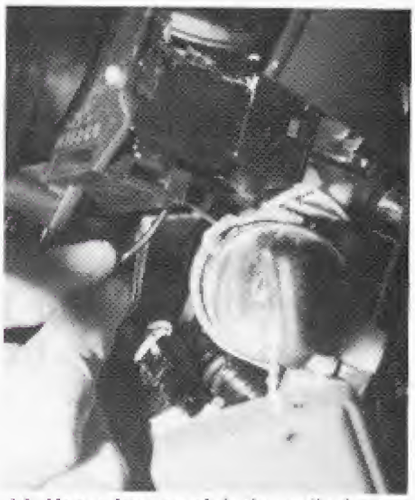
The ignition, after sliding out of the housing, still has one wire attached to its side. This is the buzzer activator switch. It is a micro-switch and is very delicate (*see photograph 15*).

Before removing the phillips head screw, remove the key from the plug. This lessens the chance of damaging the switch.

With the key removed, take the screw out. Then, using a small flat blade screw driver, gently pry the back of the switch up at the screw hole side. Pick the back of the switch up and slide it out from the cylinder (*see photograph 16*).

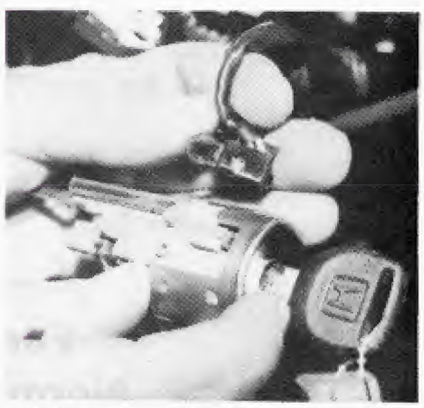
To replace the ignition, reverse the order of removal with these notes:

Make sure that the key is not in the cylinder when replacing the buzzer activator switch. And, make sure that the key is not in the cylinder when replacing the shifter interlock switch.



14. Use a key or pick the cylinder to the "Accessory" position, depress the retainer and pull the cylinder from the housing.

15. Later model Hondas have the buzzer activator switch attached to the side of the cylinder.



16. Remove the screw and gently pull the switch up and away from the cylinder.

Honda vehicles before 1991 will not have the switches and light lens. As stated earlier, simply turn the key to the "ACCESSORY" position and depress the retaining button while pulling out on the lock.

Now for the exceptions. We will cover the 1992 — 1993 Accord EX wagon just briefly. Removal and service of this ignition is identical to the removal just shown except for a pair of wires that run up to two contacts inside the cylinder facecap, much like the contacts built into the GM VATS ignitions.

After completing cylinder removal either remove the facecap and contacts, which come off with the facecap, and leave them in the vehicle, or, using a thin pick, remove the two wire leads from the terminal block under the dash. (For full service procedure see *The National Locksmith*, April 1992, page 26).

In 1992 Honda introduced a new ignition to the Civic. From the outside it looks typical Honda (*see photograph 17*). To remove:

17. The new Civic ignition, introduced in 1992.

18. Use a key or pick the cylinder to the "Accessory" position. Depress the retainer and pull the cylinder out from the housing.

Use a key or pick to the "ACCESSORY" position. Depress the retaining pin, located about 1-3/8" back from the face of the cylinder and in line with the "ACCESSORY" mark on the cylinder facecap. Notice that there is no need to remove any switches (*see photograph 18*). All switches are independent of the cylinder.

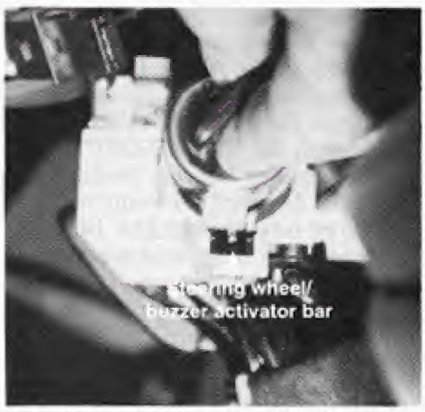
With the button depressed, the cylinder pulls out only about 1" and then stops (*see photograph 19*).

Pulling the ignition up reveals that the steering wheel locking/buzzer switch bar is no longer part of the cylinder but part of the housing. This bar rides down a groove formed in the cylinder and traps the cylinder in place before it can be totally removed (*see photograph 20*).

To complete the removal, use a pick to pull down on the bar. This will release the cylinder, and allow it to be removed. (*see photographs 21, 22 and 23.*)

When reinstalling the ignition, make sure that this bar is pulled down, and slides into the cylinder's groove.

19. The ignition only slides out of the housing about 1". *Do not force it further.*



20. The steering wheel locking/ buzzer activator bar is part of the housing and stops the cylinder from being removed.

21. Use a pick or a small screwdriver to pull the bar down and away from the cylinder.

Door Lock Removal

Door lock removal is pretty much straight forward. With all models the door panel must be removed before the lock can be removed for service.

The early to middle 1980's is a transition year for Honda door lock location, moving from a separate lock and handle style(*see photograph 24*) to the newer lock-in-handle style.

For models with the lock separate from the door handle, removing a door clip allows the lock to slide out of the front of the door for service.

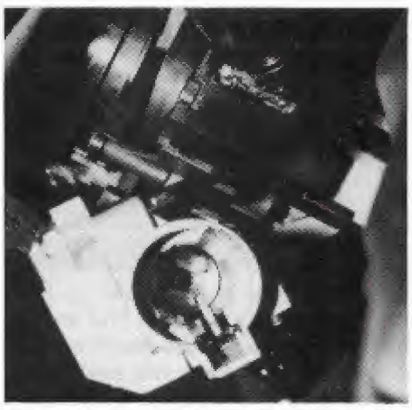
The lock-in-handle style was introduced with the 1983 Prelude, followed by the Civic in 1984, and the Accord in 1986.

Even though there are various lock-in-handle designs to date, there are only three methods of retaining the lock in the handle that Honda uses.

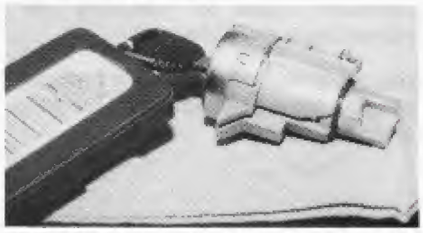
One method started with the 1983 - 1991 Prelude whose lock is identified by the concave facecap (*see photograph 25*). This handle actually forms the shell or casing for the lock plug. In order to service this lock the whole handle must be removed. To remove the handle, disconnect the plastic lock and handle linkage clips and two 10mm bolts holding the handle to the door. Let the handle and lock fall out the front of the door.

In 1984 the Civic went to the lock-in-handle design. The method for retaining the lock in this model was a wire clip. The Accord DX followed in 1986.

The final method is used by the

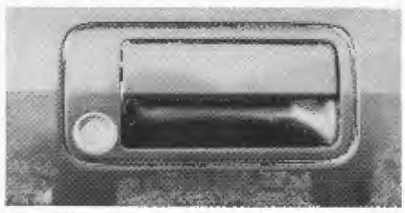


22. With the cylinder removed, the bar is easily visible.



23. This is the Civic cylinder. The groove along the bottom is where the locking bar fits into.

24. This lock is separate from the handle, and is common among Hondas in the early to middle 1980's.



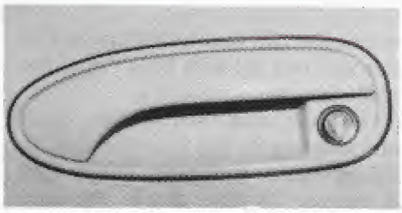
25. This handle is from a 1987 Accord. The concave facecap of the lock is identical in appearance to the 1983-1991 Prelude lock-in-handle facecap, but its retainers are different.

1986 - 1990 Accord LX and LXI. This lock has two spring steel tabs mounted on each side of the lock housing. The lock is pushed into a sleeve in the handle. Once seated the tabs expand into the side of the sleeve area and trap the lock in place. To remove the lock depress both of the tabs and pull the lock back out of the sleeve. There is an access whole in the sleeve at the tabs in order to depress them. Usually, it is much easier to remove the handle from the vehicle first, and then remove the lock. The handle can be removed after taking out two 10mm bolts.

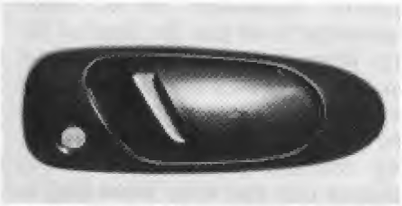
From 1992 to date, all Honda models (*see photographs 26, 27, 28 and 29*) use a wire clip to retain the lock in the handle (*see photograph 30*).

To remove the wire clip retained locks, it is usually not necessary to remove the handle from the door. After tearing down the door panel, remove the clip that holds the lock in place and pull the lock back out of the handle (*see photograph 31*).

The one addition to the door handle story is the introduction in 1992 of remote locking to the Accord EX wagon. To date this is the only model using this system. In 1992 the system consisted of a radio transmitter built into the head of the key. When depressed the door locks would open or lock automatically. The key itself has contacts on the bottom and top of the blade near the bow. The key contacts make contact with contacts (say that three times fast) in

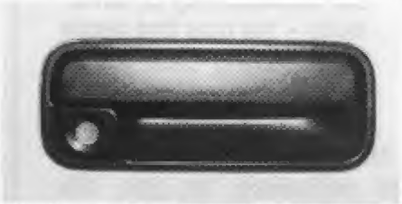


26. Oval handle and lock with facecap.

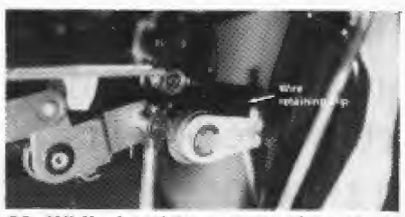


27. Oval handle and lock without facecap.

28. Square handle and lock with facecap.



29. Square handle and lock without facecap.



30. While hard to see, a wire clip is used to retain the lock in the handle. This is typical of many of the Hondas.

31. Door lock removed. Notice the groove on the top and bottom where the wire clip engages in the handle.

the ignition cylinder facecap. The purpose for this is to keep the battery in the bow of the key charged.

1993 brought some modifications to the remote system. The 1992 version operates from any direction within a short distance of the car using an RF or radio frequency transmitter. In 1993, however, the transmitter uses infrared light. According to Honda, the user must be standing within three feet of the driver's door handle for the remote system to operate. A small window is located here to receive the transmitter's signal (*see photograph 32*). (Under ideal conditions we found this distance to be roughly 10 feet and 30 degrees to the perpendicular of the handle.) Covering this small window or the key makes the remote system inoperable, regardless of distance.

With the ignition and door lock removed, we will spend next month covering the disassembly and assembly of these locks. §

32. This handle and key are for the 1993 Accord EX wagon. The small window in the handle receives an infrared signal from the key-head transmitter to activate the remote lock system. The two metal edges near the bow on both sides of the blade are contacts used for keeping the transmitter battery charged.

Tool Review

If there is one thing that locksmiths really love it is their tools. There is a tool for every purpose under heaven. Some are clever and nice to have. While others are truly indispensible. In this product review section we present you with a variety of the tools manufactured to meet the needs of the locksmith. Feel free to use the Rapid Reply card to request information on any interesting product you may see here.

A-1 Security's Jiffy Clear View

A-1 Security offers the Jiffy Clear View, a new tool, which is a thin metal shield to insert between a car door window and the rubber glass seals. This 5-1/2" long clear view tool is wedged on each end to hold back both the top rubber window lip seal and the lower foam rubber seal close below.

This tool will allow an unobstructed opening of 3/8" x 4-1/4" between the window glass and the Clear View tool. This gives a large clear opening to look into the car door and to work with the opening tools and light probe.

Circle 348 on Rapid Reply

AAble's Ford Disc-Out Kit

Frank Markisello of Aable Locksmiths has designed a tool kit to remove the hard plate located in all Ford pin type ignition cylinder from 1976 through present time. This hard plate is located in front of the pins and at the shear line so you cannot drill or shim the pins. The disc-out has a special cutter with a stop on it so you can drill around the hard plate, but not hit the pins. Then you can reverse shim the pins to turn the cylinder to the on position for fast removal of lock.

Circle 349 on Rapid Reply

Creative Products Easydriver®, U.S.A.

The Easydriver® from Creative Products is a ratcheting manual screw and socket driver. The "Natural-grip," unbreakable, patented driver comes in two sizes with multiple shafts, tips, and attachments and an unconditional life-time guarantee.

Circle 350 on Rapid Reply

Dremel's Cordless Moto-Tool

Dremel's cordless high-speed Moto-Tool, the Freewheeler™, is the perfect companion for the on-the-go locksmith. The model 8508 Freewheeler kit uses all the accessories and attachments available for the 120V corded Moto-Tool, Without a confining cord. The two-speed tool uses a 6.0-volt high-torque motor powered by five Ni-Cad batteries.

It operates at 15,000 and 20,000 RPMs to cut, grind, sand and polish wood, metal and plastic.

Circle 351 on Rapid Reply

ESP's Double Sided Pick Set

Another "work saver" tool set specifically developed for opening most disc tumbler double sided locks has been introduced by ESP Lock Corp. The Double Sided Pick Set (No. DSD-4) includes complete instructions and hints on how to properly use the four various picks. This new pick set is available now from your locksmith distributor.

Circle 352 on Rapid Reply

Gesswein Swiss Escapement Files

Swiss escapement files are designed for precision work in confined space. Very popular with watchmakers for use in tight areas, Gesswein escapement files are perfect for filing, smoothing and finishing.

Offered in 12 popular shapes and in an assortment of cuts ranging from 0 to 8. Length of cut varies from 1-1/2" to 2-1/2" according to shape. Files are 14cm (5-1/2") in overall length including handle, and are sold individually and in sets.

Circle 353 on Rapid Reply

Gil-Ray Offers Cutter Sharpening

Gil-Ray Tools Inc. offers a mail in sharpening service for dull key machine cutter wheels. Established in 1945, Gil-Ray Tools sharpens and repairs all types of dull key machine cutters including code cutters, duplicating cutters, flat slotters, and file cutters. They sharpen all materials including High Speed Steel, Tool Steel and Carbide.

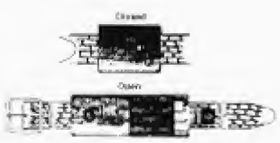
All dull wheels are restored to blueprint specifications and can be sharpened many times. They also sharpen end mills, hole saws, and other locksmith tools.

Circle 354 on Rapid Reply

HPC's KGB-1 Belt Tool Kit

HPC's KGB-1 fits directly onto your belt and can be worn anywhere. It comes equipped with 6 tools (3 picks, 1 extractor and 2 tension tools). The overall length of each tools is only 3 inches. All of the tools lie flat in the leather case, allowing it to be worn discreetly. The case is 3-1/2" long x 2 1/4" wide.

HPC's KGB-1



Circle 355 on Rapid Reply

Jensen Tool's Portable Light Kit

Unique, portable light combines a high intensity beam with a flexible shaft to illuminate hard-to-reach, hard-to -see areas. Miniature pre-focused lens and lamp (rated at 2.5 volts) concentrates a brilliant light into a pinpoint beam. A 1/8" x 10" special alloy shaft bends to almost any configuration, to reach around corners and obstacles and into areas as small as 1/4" wide.

Circle 356 on Rapid Reply

Cap Tool From LAB Security

The Cap Tool, a time saver tool made especially for locksmiths, is available from Lab Security Systems. This easy-to-use tools is for use with Schlage, Weiser, Falcon, Weslock and Arrow cylinders. It depresses the cylinder cap pin to remove the cap in one easy turn. Thousands have been sold and are in stock now at your LAB distributor.

Circle 357 on Rapid Reply

Major Mfg.'s Drill Guide

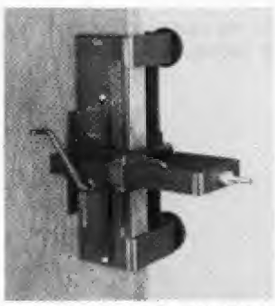
The HIT-10 is a multi-purpose drill guide from Major Manufacturing. The tool is used to retrofit doors, to accept Simplex Unican's 1000 series and Alarm Lock's. DL2500LE Trilogy push button locks.

The through bolt holes are located for both manufactures with hardened drill guides. Larger holes for the Unican combination change and Alarm Lock's wire run are piloted first with a 1/4" hole that will allow a hole saw to drill to correct size.

Circle 358 on Rapid Reply

Marks Mortise Installation Tool

The Mark's J8000 mortise installation tool makes mortising doors easier. The tool is used with a standard 1/4" electric drill for mortising 1-3/8" to 1-3/4" thick doors. Mortise depth adjustments can be made easily. In addition, a faceplate routing attachment is available. The entire system fits into a heavy-duty, custom carrying case for portable on-the-job mortising. To make the job easier, Marks has developed a videotape graphically demonstrating the use of their Installation tool.



Circle 359 on Rapid Reply

Continued on page 42

Continued from page 40

Pro-Lock's Lighted Follower

Tired of being out on the fob and not being able to see the pins inside a housing that you have to reload?

Here's your solution. This clever tool is a standard plug follower with a bonus; it's got a built-in light. That's right, the center of this follower is a pen light designed to make your job easier. The follower also includes an extra sleeve so it can be used with both the small and large size plug diameters.

Circle 360 on Rapid Reply

Security Corner's Accumark I Fixture

The Accumark I not only imprints your company name and number into the head of keyblanks, but with the same tool imprints your custom message into the face of most brands of mortise cylinders. the stamping fixture is designed to accept any standard stamp made by several manufacturers. A locksmith already using a hand-held stamp to imprint keyblanks would only need the fixture. It is made of solid steel and takes up less than four inches on a workbench.

Circle 361 on Rapid Reply

Steck's Lockout Tools Kit

Steck Manufacturing Company announces the introduction of their newly revised Lockout Tools Kit for unlocking automobile and truck doors. Three tools have been deleted from the previous kit and four new tools have been deleted from the previous kit and four new tools have been added to make up this new kit. The #32700 kit allows the user to unlock almost all cars and light trucks on today's highways including the new Japanese cars by actuating lock linkage inside the door cavity or by reaching inside of the car itself to move the lock slide or button.

Circle 362 on Rapid Reply

Tanner Offers Security Bit-Kit

Tanner Bolt & Nut Corp. offers the Security "Bit-Kit", a new tool kit which contains the most popular security screw tools including: Tore, Socket, Spanner, Tri-Wing and Phillips Security bits. Tanner offers a complete line of security fasteners and masonry anchoring devices.

Other lines carried in stock include self-drilling screws, Lenox saw blades, Champion cutting tools.

Circle 363 on Rapid Reply

A-1 Security's Ignition System

A-1 recently introduced its Ignition Pick & Decoding System for G.M. The system is designed to pick and decode most G.M. ignitions in minutes. According to A-1, the system uses uniquely designed tension probes and decoding tools to defeat ignitions.

Since removal of "rabbit ears" is necessary, the kit includes a special bond to assure "ears" are re-secured tighter than originally.

Circle 364 on Rapid Reply

Aable's Squeeze Lock Plug Remover

Frank Markisello of Aable Locksmiths has received his patent from the US Patent Office, for his Squeeze Lock Plug Remover Tool, which will enable you to remove all squeeze lock cylinders from all GM, Chrysler, AMC, and Ford vehicles in less than 15 seconds.

This tool is so simple and accurately designed that you can do the job in the dark if needed.

Circle 365 on Rapid Reply

Dremel's High-Speed Moto-Tool

Locksmith can rely on Dremel's high-speed Moto-Tool™. The compact variable speed Moto-Tool, model 395, operates between 5,000-28,000 RPM to speed through cutting, grinding, sanding and polishing jobs in wood, metal plastic and other materials. Its high-speed motor tackles jobs such as cutting hardened steel.

The Moto-Tool uses a variety of accessories, including drill bits, cutting wheels and wire brushes.

Circle 366 on Rapid Reply

ESP's Camlock Rekeying kit

ESP Lock Corp. offers a no frills rekeying kit that gives the locksmith exactly what's needed to rekey camlocks wafer tumblers and springs. All unnecessary parts that clutter up the locksmith's work area have been eliminated. The locksmith gets exactly what's needed - nothing more and nothing less.

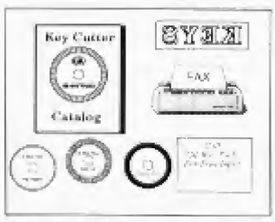
Used in rekeying 90% of the wafer camlocks in the marketplace, the CRK-30 features a portable, spill proof, durable vinyl case that fits snugly in a shirt pocket.

Circle 367 on Rapid Reply

Gil-Ray Tools Cutter Catalog

Gil-Ray Tools Inc. has a new catalog that features their precision key machine cutter wheels. The company manufactures replacement cutters for most popular key machines including code and duplicating machines. Cutters are manufactured by Gil-Ray at their Bay City, Michigan plant.

Gil-Ray sells direct to locksmiths and cutters are in stock for immediate delivery. The new catalog contains specifications for most cutter wheels in existence today. Gil-Ray Tools has manufactured precision key cutters since 1945.



Circle 368 on Rapid Reply

HPC's Improved Flip-It™ Tool

HPC's Flip-It™ has been improved! The average flip of the Flip-It™ is now 135 degrees.

When picking a lock in the wrong direction (intentionally or by error) the all-new Flip-It will flip the cylinder plug past the upper pins and save you the time of repicking. The Flip-It comes with two exclusive features. The two pin Quick Lock/Release feature allows for easy release of the rotating action. The sure stop feature prevents over winding in either direction. The Flip-It carries HPC's new high quality five year warranty.

Circle 369 on Rapid Reply

Jensen's Swiss Needle File Kits

A selection of Swiss-made needle files has been packaged in 8-piece kits by Jensen Tools, and are featured now in the 1993 Jensen Master Catalog. These fine #2 cut (medium) files are a top-of-the-line Grobet-Swiss product. They reflect 120 years of Grobet-Swiss experience in the manufacture of precision tools, and are highly recommended for intricate work. In addition they carry Jensen's lifetime warranty.

Jensen offers these 8-Piece Needle File Kits in a choice of 4" and 6-1/4" file lengths.

Circle 370 on Rapid Reply

Major Mfg.'s HIT-12 Tool

The HIT-12 installation tool, from Major Manufacturing, was designed to retrofit key in lever cylindrical locks by US Lock, LSDA, Granite, Cal-Royal and Best. Through bolt holes and anchor plate lugs are located with hardened drill guides. This tool is designed with a back plate that will allow drilling through the door without removing the unit or drilling from both sides.

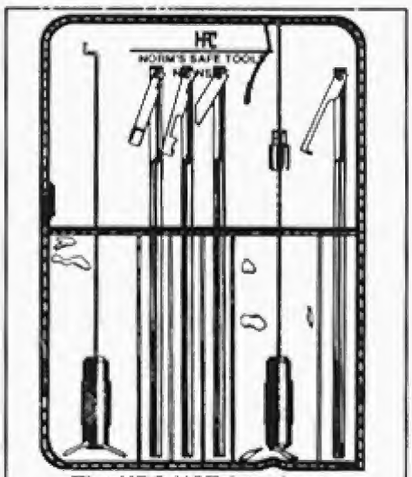
Circle 371 on Rapid Reply

Locksmith Tools...

HPC Safe Tools

"By using some special tools that HPC makes, locksmiths can get vandalized safes open without drilling and searching."

When a would-be burglar attempts to break into a safe without knowing what he is doing, the safe is more likely to be bungled than burgled. The burglar will usually knock off the dial, then punch in the spindle, thinking that will get him into the safe. All it really does is knock the back cover off of the combination lock case, which sets off the relocker. Unfortunately, this happens all too often. When it does, locksmiths who do safe service are faced with the difficult problem of getting the safe open.


The HPC NST-6 tool set.

For many years locksmiths drilled and searched for just the right spot to either destroy the relocker or reset it. This frequently took hours and hours of work, wearing out both the drill bits and the locksmith doing the drilling. Now, there is an easier way. By using some very special tools that HPC makes, locksmiths can get these vandalized safes open without having to resort to all that hard work.

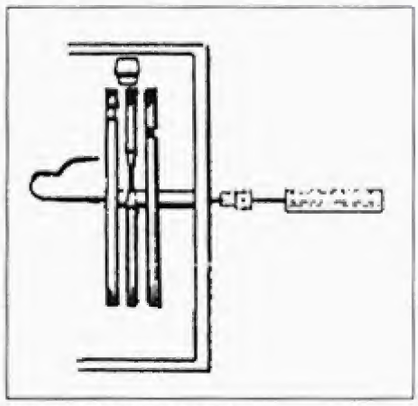
HPC manufactures a set of tools (NST-6) that can help in this situation. The tools are designed to go through the safe door, into the combination lock and through the spindle hole. There is no necessity to drill another hole. The tools are designed to work on Group II locks made by LaGard, Mosler and Sargent & Greenleaf.

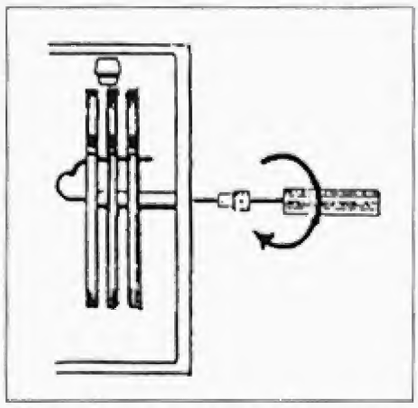
Two tools are used together to operate a lock. The six tools are designated as NST-A through NST-F. NST-A, NST-B, NST-C and NST-E are relocker trigger reset tools. These four tools are all similar in that they are each long, flat pieces of steel with a handle on one end and a small hinged piece on the other end. A small rivet attaches the two pieces together near the end of the longer piece. The hinged pieces stow in line back over the longer piece, but when turned will fall by force of gravity to about an 80 degree angle. When the smaller piece swings out it is prevented from going out any further by a stop on the larger piece.

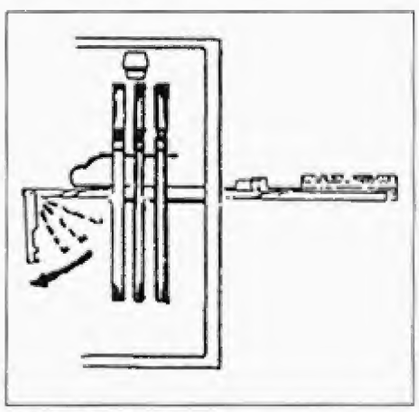
NST-D is a tool to align combination wheels. NST-F is a tool used to pull the lever back on a Mosler lock.

For the LaGard 1800 and 3330 locks, tool NST-D is inserted first. This tool is used to align the gates on the wheels and then turn them so that they are under the fence. The tool is made of spring steel rod so that it will compress for entry through the spindle hole, then spring back to its proper dimension when fully inserted. When this is done, insert tool NST-A. When it is fully inserted turn the handle so the small piece will swing down. Situate the tool so that the end of the small piece is over the relocker trigger, which is a piece of formed wire. Pull out on tool NST-A to defeat the relocker than rotate tool NST-D to retract the lever.

Sargent & Greenleaf R6700 series Group II locks may have either of two different type relockers. The older type is a small spring-loaded pin with a washer near one end. The newer type, which is easier to work with, is a formed, spring-loaded lever. The lock case cover holds it down and when the cover is off the spring pushes it against a


Insert alignment tool.


Locate gates by drawing outward and rotating.


Insert relocker tool.

Continued on page 93

Test Article #9
Electronic Security
To be tested in March 1993 issue. Details in insert in front of issue.

Access Control: Readers

"This article is part of our Security Certificate Program. In the current issue, the content will be tested."

To date we have looked at access control from a very broad and general perspective. In these terms, access control is very easy: all systems have three components, the sensor, control panel and the electric lock/strike.

This article focuses in on sensors. In the access control field the sensor part of the system is called a reader. There are many types of readers available as well as varying technologies utilized in each type. We will take a look at these technologies, their applications, and their advantages and disadvantages.

Readers in essence are the ears, eyes and hands of the access control system, receiving and transmitting information provided by a user back to the control panel for interpretation.

From the previous access control article, readers are divided into three separate forms based on how the information is stored and transmitted: Keypads, registers, and biometrics. In access control terms the keypad group is known as knowledge based, the register group as possession or token based, and the biometric group as physical characteristic based.

Knowledge based readers require that a user know a code or password. Keypads are probably the most common reader of this type and utilize various technologies. Information for the keypad is known by the user(s) in the form of a code number or password, and is entered into the keypad through depression of the keypad buttons.

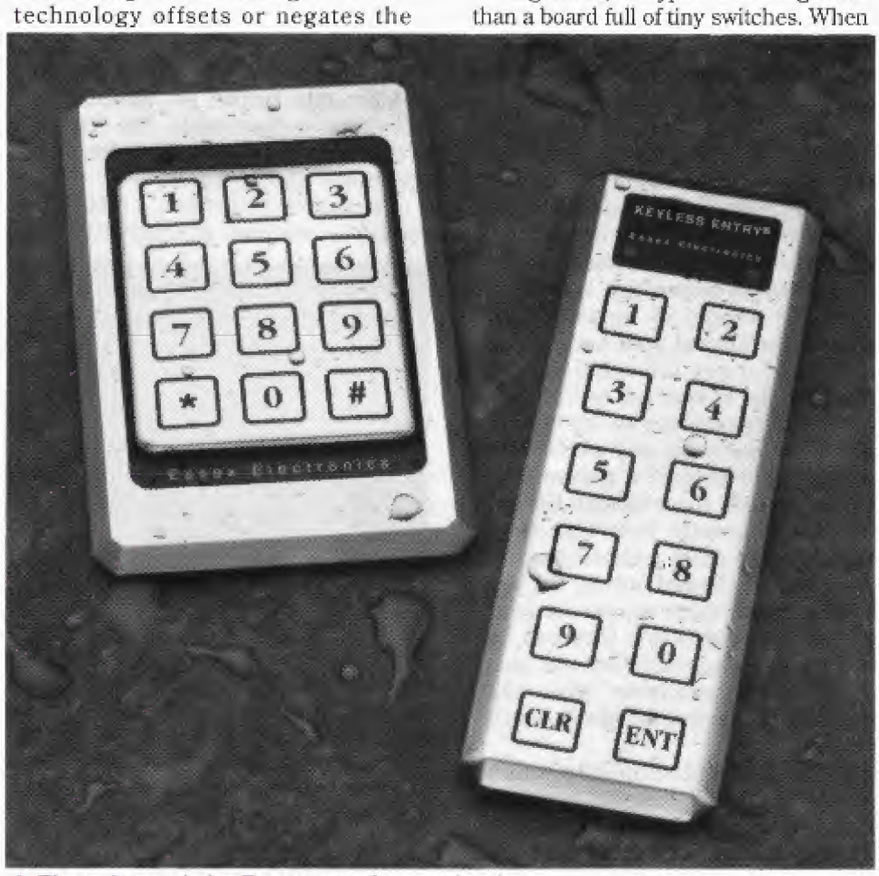
Possession based readers utilize various technologies that encrypt information onto a material carried by the user(s). The most common is a card, usually made of PVC, although tokens are used as well. The card or token is carried by the user(s) and swiped, touched or inserted into a reader that accepts and transmits the information stored on the card or token to the control panel.

Biometrics or physical based readers use physical characteristics or traits of the user(s) as information. This information is inherent to the user, the most common of which is fingerprints, retina prints, and voice prints. Readers of systems utilizing this particular technology accept and transmit the information to a control panel.

It should be noted here that even though these reader types have been listed separately, it is becoming more common to integrate two or more of these technologies together, creating systems that are better controlled. Borrowing the advantages of one technology offsets or negates the disadvantages of the other. This dual technology is used in bank cards that not only use a magnetic swipe card but also require the user to enter a personal identification number (PIN) on a keypad as well. Future advances in banking, as well as other applications, may include photo ID or biometric technology.

Knowledge Based. Keypads are one of the most common type of readers and are often included in dual technology systems. They are versatile in application, ranging in use from the simple stand alone system up through multi-door, PC controlled systems.

In general, a keypad is nothing more than a board full of tiny switches. When



1. These keypads by Essex use piezo technology.

one of the switches is depressed it closes or completes a circuit. These closures are recorded by the control panel. Essex Inc. has incorporated several other technologies to the keypad including piezo electronics and Wiegand.

Piezo technology uses the interesting characteristics of piezo material, usually a ceramic. One of these characteristics is that applying a very small electrical charge to piezo material will cause it to move or vibrate. Common to every household are the annoying high pitched squeals and blurps emitted from small hand held video games. These noises are produced by a piezo sounder, piezo material that has had a charge applied to it.

The second interesting characteristic of piezo is that by bending or applying pressure to the piezo material electrical voltage can be *created*. This is the particular characteristic that Essex utilizes in their 300 line of keypads (*see photograph 1*). A small wafer of this material is installed to the back of a stainless steel button. Pushing the button (as little as two microns, or two millionths of an inch, or .000002 ") bends the piezo wafer enough to generate an electrical charge that is recorded by the control panel.

Another technology that Essex has adapted to keypads is Wiegand. This technology will be discussed in the section on possession based readers.

The popularity of the keypad for access control can be attributed to the typically simple technology, lower cost and wide range of applications. Because the keypad does not need to read and format information (;t's integral to the system and technology) before it is transmitted to the control panel, less hardware and electronics are needed to produce a system. The resulting benefit is severalfold: Keypad systems generally cost less than systems using other technologies; its physical size is limited only by the size of the keypad; there are no cards to lose, forget or destroy; they can be used for single or multi-door use; and, systems are available that can accommodate several thousand users if needed.

While cost and simplicity weigh heavily in favor of keypad systems, there are several conditions that will affect its use. Foremost is security. Keypads are considered low security.

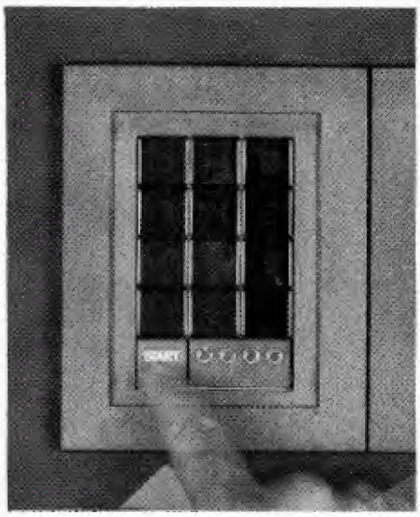
In a keypad situation, a user is given a code or password that they need to remember. While it is always advised against, many users, in an effort to remember their code, write it down and place it in a wallet or purse. Should the wallet or purse be lost or stolen, so goes the code and the integrity of the system until that code is removed from the system.

Also, there may be a tendency on the part of the user (again, against proper advise) to give the code to a friend, colleague, or relative. This too, violates or degrades the integrity of the system.

Finally, onlookers may watch as a code is being entered. Fortunately, this breach of security has been addressed by several companies through various methods. The most common method of preventing onlookers is to provide a shroud or cover around the keypad, allowing for only a limited view of the buttons. Other companies incorporate shrouds as well as button digits that can be viewed only if standing within certain angles of the keypad.

Hirsch Electronics manufactures the Scrambling keypad that incorporates two methods of securing the entry of a code. The first is a four degree horizontal viewing restriction. Unless the user stands almost directly in front of the keypad, the numbers are not visible or discernible. The second, is that for every entry the numbers are scrambled. (*See photograph 2.*)

To view the numbers, a "START" button is touched. At this time, the numbers become lit and are randomly scrambled across the face of the keypad. The next time this, or any other, user touches the start button, the numbers are scrambled again, moving to different locations on the face of the keypad. Even though the user's code never changes, the location of the numbers on the keypad change, thus changing the entry pattern of the code.



2. The Hirsch keypad provides a high degree of security by limiting the angle of vision of the numbers on the keypad as well as having the numbers "scramble" before each use.

This particular feature accomplishes three things. First, an onlooker cannot learn a user's code through pattern recognition of the user's keystrokes. If a pattern is remembered, the actual numbers do not need to be known. Duplicating the pattern will usually reveal the code. Second, because the numbers are never in the same place, observing what buttons are touched will not reveal the code. Third, because the numbers are scrambled, all the buttons on the keypad get used. Therefore, the buttons do not exhibit a dirt or wear pattern, and dusting for prints after use will not reveal a code.

Another consideration in using keypads is the number of users. In circumstances where there is a high number of users, keeping track of the codes, and making sure that codes are not closely related can be a challenge.

When creating codes for a system with a large group of users, there are several types of codes that should not be used. These include codes that use less than four digits, are sequential, or use the same digits more than three or four times consecutively. Also, no two or more separate codes should be consecutive or follow a pattern. Many keypad systems do this automatically and will not let unfavorable codes be entered.

Finally, keeping track of a large number of codes demands a great deal of organization and planning. Keeping track on the status of each user code may require a printer. Some keypads offer a liquid crystal display (LCD) so the entries can be seen. Still, entering all the codes, and making sure of each user status on large systems can be tedious.

Possession Based.

There are several possession based technologies: hollerith, barium ferrite, bar code, magnetic stripe, Wiegand, proximity and touch memory. These technologies may use a card or token that is either static or dynamic. A static card is read all at once. A dynamic care is read progressively.

In general, possession based

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technology offers a much higher degree of security and reliability than keypads. While most of the techniques are hard to duplicate, their main weakness lies in the card or token being lost, stolen and/or damaged.

Accompanying one of these technologies with another, such as requiring a PIN number, strengthens the security of this technology.

Hollerith. Hollerith is probably one of the oldest and least used technologies today. This particular method incorporates cards that have holes punched in them in a format proprietary to the manufacturer. Many older computer systems used this method for inventory and stock control.

Hollerith uses several different means for reading the card. Mechanical readers may use switches to sense the position of the holes in the card. Electronic versions typically use light (LED's) and light sensors to sense the position of the holes.

VingCard, a division of Abloy, has successfully developed this technology for access control geared towards the hospitality market: i.e. hotels, motels, etc.

In their mechanical version, ball bearings fall into the different holes of the card. If the card is correct, a shearline will form allowing the stand alone lever unit to operate. (*See photograph 3.*)

VingCard's electronic version uses light and light sensors to detect the holes in the card. Their electronic version may serve as a stand alone or in a network with other units.

3. VingCard uses hollerith technology for access control designed for the hospitality market.

This technology has generally been regarded as low in security.

Bar Code. Stores use it, manufacturers use it, libraries use it, universities use it and we have all seen it. The bar code is a simple technology using a series of vertical bars or stripes of varying width and spacing as information. There are currently several different standards for bar codes dependent upon the application: i.e. UPC symbols (used for groceries), ANSI, etc. The bars are picked up or read by a passive infrared light reader.

Bar coding offers a couple of end user advantages. First, it is inexpensive. Second, end users do have the capability of making their own cards. This allows for on-site card making, eliminating the need for going back to the distributor or manufacturer for more cards.

The one major weakness of bar code is its ability to be easily copied. Many companies today use a black mask over the code. The mask prevents copying without blocking the infrared light from seeing the code. Other security measures include custom coding or encrypting.

Bar code technology is extremely useful when integrating with other technologies. Intelligent Controls, Incorporated is one company that is successfully using bar code technology. (*See photograph 4.*)

Magnetic Stripe. This type of card is by and far the one we are most familiar with. Credit cards, bank cards,

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4. This is a sample of a temporary card that can be produced on site, using bar coding by Intelligent Controls Incorporated.

gas cards and charge cards all utilize the magnetic stripe.

In essence, the stripe technology is made up of a highly coercive magnetic material or stripe (similar to tapes and computer discs) attached to the back of a card. Reader heads, also similar to tape and computer application, read the information. Information is encoded and read from the stripe using a technique known as Aiken Biphase or two-frequency coherent-phase encoding. In layman's terms, the information is magnetically encoded into three different tracks utilizing a binary format.

Cards and encoders are inexpensive and easily obtainable for this technology, making it popular among access control manufacturers as well as other industries.

The security of the magnetic stripe is relatively low because of the ease of duplication.

Barium Ferrite. Barium ferrite is also an older technology that is currently experiencing a comeback. The term barium ferrite comes from the material used in making the cards. A thin layer of plastic resins impregnated with barium ferrite (the same material that refrigerator magnets are made of) is sandwiched between two layers of plastic (typically PVC) to form a card. The card is encrypted using equipment and a format proprietary to the manufacturer. The encryption process is comprised of magnetically activating the barium ferrite at various points on the card, in the manufacturer's format. Reading the card can be done mechanically or electronically.

In mechanical readers, a series of magnets are set in rows and columns. At rest, these magnets block a shearline formed by a top and bottom plate. When the correct card is inserted, the energized points on the card raise the magnets above the shearline, allowing the card to activate a switch. (*See illustration 5.*)

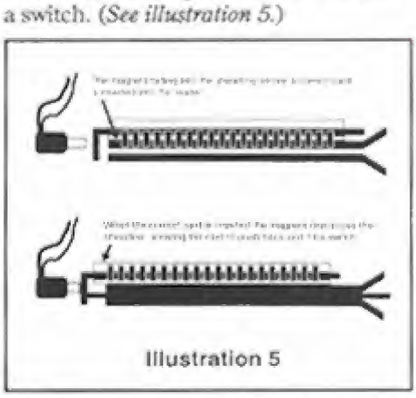


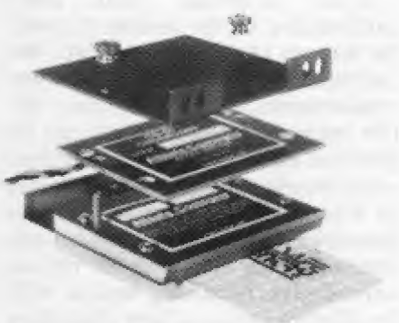
Illustration 5

Because it is mechanical, limited electrical installation is required. A switch at the back of the unit can be tied into an electric lock/strike or alarm system. This particular type of reader will only allow one card to be used. While any number of users may have a card, all the cards are the same. If a card is lost or stolen, the reader must be changed and everyone issued a new card.

The electronic readers incorporate sensors that detect the energized spots within the card. Unlike its mechanical brother, an electronic reader is much

more versatile and can handle hundreds of separate users.

Recent improvements in this technology by such companies as Allsafe have created a resurgence of barium ferrite systems in the field (*see photograph 6*). Most noticeable is the ability to create an inexpensive disposable paper card. Systems using this card can be programmed to accept the card on a limited or timed basis. Parking garages, hospitals and universities, for example, can give cards to visitors allowing access to parking or other areas for a particular number of occurrences, or for a specified time frame.



6. This is an exploded view of the Allsafe AS-111 mechanical barium ferrite reader and card.

When the card expires, the system no longer accepts the card or user, and the card can be thrown away.

Because both the encryption process and card formatting are proprietary to the manufacturer, card duplication is very difficult, and has been compared to Wiegand. Yet, the cost of the readers and cards are compared to the lower priced magnetic stripe technology. The reader and card for the barium ferrite system are weather resistant and the reliability high.

Wiegand. Invented by John Wiegand, this technology uses wires embedded in a card to create a unique code. The reader forms a magnetic field that the card passes through. The wires in the card passing through the field induce a series of pulses in the coil, creating a binary encoded number. The first part of this number is the site code followed by a PIN number.

The card and reader are weather resistant and highly reliable. The difficulty of duplication makes this technology secure. Pricing on Wiegand is generally higher than magnetic stripe and barium ferrite, but lower

than proximity.

Proximity. Proximity derives its name from the fact that the user and card need only be near or in proximity to the reader, usually within eight inches. Cards for a proximity system are actually small transmitters that send encoded information to the reader.

The nice feature of proximity is that the reader can be hidden within or behind walls, leaving the aesthetics in tact, and the reader impervious to vandals.

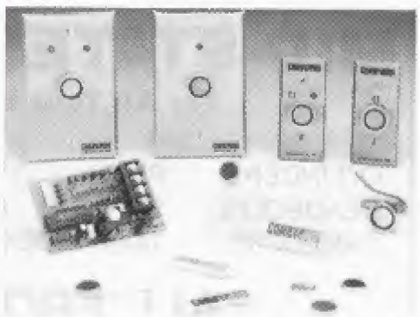
Like Wiegand the proximity card is extremely hard to duplicate, offering a high degree of security.

The weak point of the proximity technology is high price.

Touch Memory. (*see The National Locksmith, October 1992, page 61.*)

Recently developed, touch memory employs a microchip stored in a stainless steel canister. Roughly the size of dime, or a button, this small device is attached to various materials including cards, key fobs, ID badges, etc. To activate a system the button or cell is touched to the reader, transferring all necessary information.

Unlike other possession based technologies, touch memory has a read/write capacity and a real time clock allowing audit trails to be recorded on both the reader and the cell. The chip's memory is password protected, making alteration and duplication nearly impossible. (*See photograph 7.*)



7. Corby now employs the Touch Memory data chip for access control.

Of the possession based technologies, touch memory offers the highest degree of security and versatility.

Physical Characteristic Based.

Called biometrics, physical characteristic based technology uses information that is inherent to the user: e.g. finger prints, retina scans, voice prints, etc.. To use the system, a template of the user's physical trait is first entered and recorded into the system. The physical characteristic of the user must then match that template every time the system is activated.

Biometric systems are extremely difficult to defeat and are used in high security applications. Until recently, these systems have been very high priced.

Now, what to do? To this point several different reader genres have been briefly outlined. When and where to use which technology depends on many factors including the customer's needs and the environment in which the system is being used.

Some criterion that need consideration are the number of users, the degree of security needed, the customer's budget, weather requirements, vandal resistance, etc. The more information that can be gathered concerning the application requirements, the easier it is to decide on what technology may be most favorable. And while there are many companies that employee the various technologies, becoming familiar with the different products, their capabilities and limitations, only makes the job easier. §

Computer Programs...

CodeMaster By Treskat

"With the advent of programs that create masterkey programs and find key codes, I feel computers are the way to go."

If you're like me, you now have approximately 150 pounds of code books in the service vehicle. (Comparable to the weight of another man.) And even though they are an indispensable part of locksmithing, keeping them up-to-date is high maintenance. The time spent looking for codes has become more time consuming and costly. And the battle to preserve the pages from wearing and tearing, especially under inclement conditions, is increasingly difficult. So, what do you do?

KISS (Keep It Simple, Stupid) has always been a favorite acronym, especially when it comes to new tools and procedures, and even more so when we talk about computers. While I have been neither scared of computers nor totally ignorant of their use, I've always wondered if it was worth having a tool around that took more time to set up and learn to use than it took doing the job the "good old fashioned way". With the advent of programs that create masterkey programs and find key codes, however, I'm beginning to change my mind.

Treskat USA offers CodeMaster, as well as several other software packages, that cater to the locksmith. A unique marriage between 11 years of full-time software development and 20 years of locksmith experience have contributed to the friendliness and usability of the Treskat packages.

CodeMaster, as well as the other Treskat programs, will work with IBM and compatible computers. For those familiar with computers, the two million codes provided by Treskat use only 1.5 megabytes of hard disk space.

For this article we used an IBM 386 compatible. To install the program we took the first of six 5-1/4" discs, the CodeMaster Index and Program, inserted into the A drive, typed and entered "install". The program did the rest. As each disc completed its installation the computer prompted me to either put in a new disc and hit the "C" key for continue, or any other key

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Delta® Vehicle Security

Delta Vehicle Security is proud to introduce the only "KWICKIE" installed auto alarm system designed, engineered, and manufactured in the United States.

The DA-120 can be fully installed by connecting two wires and two self threading screws. Included as standard features are direct battery hook-up, adjustable shock/glass break detector, new patented quick install bracket starter interrupt output, two 100 foot range remote RF transmitters, 125db super siren, intrusion event memory, arm/disarm verification, after fan circuit protection, panic system, door entry protection and more.

The DA-120 housed inside a new composite polymer casing that shields the unit from extreme temperatures and the hostile environment in the engine compartment.

The DA-120's RF transmitters are encased in a sturdy water resistant high gloss black plastic shell, designed with a modern high-tech look. The economical pricing, quality and ease of installation makes the DA-120 very competitive in the self contained auto alarm systems market.

Delta Vehicle Security was established in 1986 and has offered quality, economical auto security alarms and accessories to the industry without the restrictions usually associated with large corporations. All of Delta's USA manufactured equipment offers a limited life time warranty and is backed by an excellent serviced program.

For FREE Information
Circle 383 on Rapid Reply

by Dale Libby

Cam Punching, Yes or No?

"Procedures change. Drill points change. Attitudes change. Whatever works for an individual safeman is what is best."

As we progress and become more professional, we will, as safe technicians, change our attitudes and procedures for opening safes. I remember when I first started writing many years ago, I was all for angle drilling outside the dial ring to gain access to the lock. The next major change in my safe dialing and drilling career was to pull the dial and practice under dial drilling.

Procedures change. Drill points change. Attitudes change. Whatever works for an individual safeman is what is best. There is a large controversy as to "exactly" what is best. My writings reflect what I feel is best and expedient at the time. After all, the purpose of getting a safe open is to do it in a manner which reflects professional techniques with an eye on the repair aspects, cost, availability of parts, competence, etc.

With these thoughts in mind, let us approach the opening of a Mosler 1950's vintage GSA record safe. There are many options to open this safe and many ideas crossed my mind before I chose cam punching.

First, removing the dial was out of the question. This was not a pullable dial, or in fact a replaceable dial. Any drilling that would have to be done would have to be on the outside of the dial ring, and thus visible when repaired.

A second consideration when dealing with these "flapper" locks is that it is impossible to replace the body of the lock with a new Group II type of lock. The sizes are different, and there is hardplate to consider when thinking of drilling new mounting holes, plus the bolt and cam configuration is not Group II. Measurements, that is.

Thirdly, inaccurate angle drilling into a Mosler lock can be disastrous. The lock can be damaged, and as you know, parts for these classic combination locks are non-existent except in combination lock archives. I have much

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by Jake Jakubuwski

Fear of Flying

"If you do it wrong...the instructor picks up the pieces...and looks for another student!"

About twenty years ago, I decided that I wanted to learn how to fly. I went out to the airport, signed on with a flight school, and began soaring with the eagles. (Well, maybe not right away). After 8 or 10 hours of flight time, with my instructor, Don, sitting in the co-pilot's seat, he told me I was ready to solo! To the uninitiated, a student's first solo flight is a momentous occasion. It is the first time the student pilot is allowed to fly the plane alone.

The first thing you do, as a student, before you solo is let the instructor out of the plane. (That's just in case you have forgotten what the instructor has been trying to teach you.) Next, you get permission from the tower to take off. The flight is a short one. Take off, "turn out," do a "down-wind," turn your "baseleg," do a final approach and land the plane. If you do it well, you pick up the instructor and continue your training. If you do it wrong .... the instructor picks up the pieces ... and looks for another student!

At any rate, this short, but memorable flight, (I don't think anyone forgets their first solo) represented a milestone for me. It was my BIG day! Potentially, I was on the threshold of aeronautical immortality. (Well, almost!)

I did everything that I had been taught. I got clearance from the tower. I eased the throttle out. As the plane accelerated, I pulled back gently on the yoke. The nose of the plane began to lift and I felt the "tug" as the plane left the runway. I was airborne! I felt the thrill of solo flight!

SOLO FLIGHT! My brain put the kabosh on the thrill part in less than a heartbeat; and wasted no time in telling me that I was absolutely alone in an airplane. It also reminded me that I had n-e-v-e-r been alone in *anything* that was not held firmly on the ground by gravity! I was certain, at that particular moment in my life, that my decision to fly was ill-conceived...to say the least!

Just as suddenly, the panic subsided, and I began to do what I had been taught to do. (After all, what choice did I have?) I

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Car Opening...

Opening The Nissan Altima

"They've hit the road and it's just a matter of time before calls will be coming in for them to be opened."

Import auto manufacturers are flooding the market with totally redesigned models this year. Toyota has released a scaled down version of the its new Camry, the completely new Corolla, as well as an all new truck, the T100, to fill the gap they've had in full-size trucks. Mazda released a totally redesigned MX6 and 626 this year. The list is endless with practically every import auto manufacturer unveiling new designs this year in order to attract customers and increase sales.

Perhaps the most notable of the new releases this year is the new Nissan Altima. With a barrage of advertising and promotions this new version has been moving off the lots quite briskly. They've hit the road and it's just a matter of time before calls will be coming in for them to be opened.

To open the Nissan Altima, follow the photos showing the step-by-step process. Photograph one shows the tool in what High Tech Tools terms the "Insertion Position." A ruler is used to show how far from the edge of the door you should

1. Insert tool with tip approx. 4" from rear edge of door.

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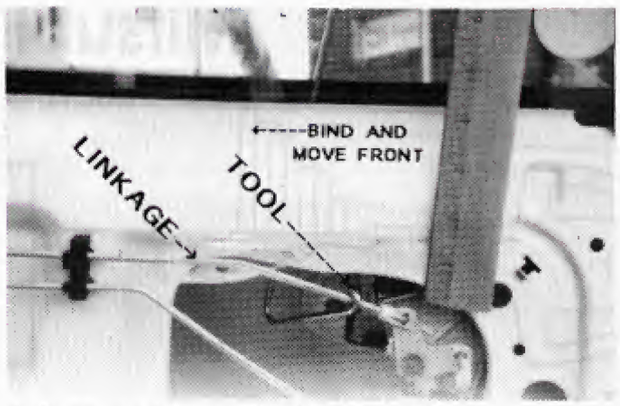
insert the tool. This provides the locksmith with the exact position to place the tool, thus avoiding unnecessary obstacles in the door. On top of that, there may be times, especially in the more heavily shielded vehicles, where the tool must be inserted in the exact position in order to hit the correct spot.

Photograph two shows the High Tech tool in the "Working Position." This allows the locksmith to see where the tool is placed once it is in the final position in the door. You can easily see how much of the tool is left exposed out of the door and where to place it.

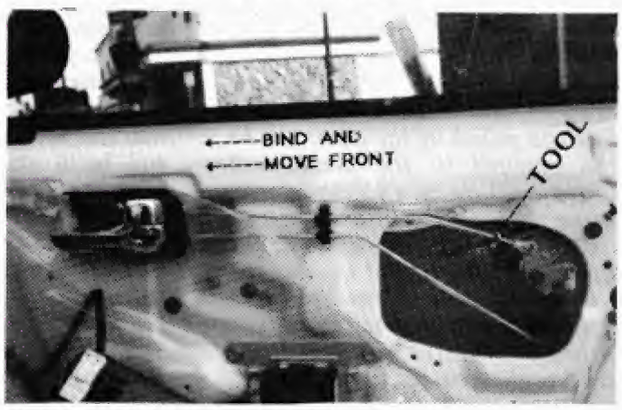
2. Lower tool approx. 5" down into door.

Photograph three shows the tool and door linkage from the inside of the door. The tool, the linkage, and the depth that the tip of the tool is inserted into the door is clearly shown, as well as the direction in which to move the linkage.

Photograph four is essentially a full view of the door from the inside of the vehicle. The tool and linkage, as well as the direction are marked on this photo as well.



3. Close-up of door without inside panel.



4. Door without inside panel.

The opening shown for the 1993 Nissan Altima is virtually the same for the 1993 Nissan Sentra. Although the tool for the Altima will open the Sentra, the reverse is not true.

This article was authored by High Tech Tools. §

Herring Hall Marvin

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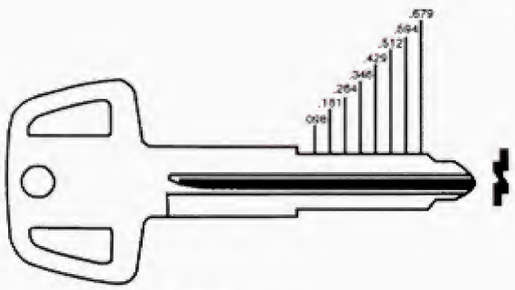
that they have numbers on them just like hand-change wheels do. I have never figured out why.

One last point: These are pretty stout little doors, but I have to tell you an experience I had with one about 15 years ago. I was over at the now defunct Northwest Safe Company one afternoon, when a badly burglarized safe just like this one came in on the back of a truck. I was pondering the possible avenues of attack, when Lee Catchpole, owner of Northwest Safe, grabbed a sledgehammer and started whaling on the door. I couldn't believe my eyes. The biggest shock of all came about 15 whacks later when the door fell out onto the bed of the truck. I scurried up onto the truck with a screwdriver and took the door apart to see what had happened. Well, the cam plate that controls the locking bolts had disintegrated, and once two of the locking bolts had fallen out, the door was open. I'll never forget that. Lee had some other interesting tricks that I'll share with you as I remember them. Sometimes it takes a similar job to jar the old memory.

Anyway, Don and I collected for the job (cash, of course), and headed down to our favorite fish place. But with our newfound fortune we decided to forego the Seattle salmon and have Maine lobster. It was great. See ya next month. §

Mitsubishi Codes

30010-32009, Part 1



KEYBLANKS
Silca Mit 11R
Curtis Mit 3/Mit 4
Taylor X224

DEPTHS
1- .232 4- .185
2- .217 5- .169
3- .201

Codes start on page 78.

Fear of Flying

Continued from page 62

began to fly the plane! Perhaps not well, but I got it, and me, on the ground in one piece and picked up my instructor. As Don climbed in the plane, and congratulated me on a successful solo, my fear of flying left me.

Since fear is, generally, a result of uncertainty (or a lack of knowledge), many of us experience "fear" when we undertake a new or strange endeavor. Perhaps, we "feared" our first day in school, or giving our first speech, or taking our driver's test. Yet we overcame that fear when we discovered it was caused simply because we were letting go of a comfortable and familiar part of our lives for something unknown. Once we recognized the unknown factor, and realized we had been taught (or had the knowledge) to deal with it; we lost our fear.

Unfortunately, there are an unbelievable number of individuals that allow their fear of the new, or different, to keep them from realizing their potential as locksmiths and business people.

That fear of the new, or different, could simply be a fear of failure. Or, a fear of what "they" might say about you. Perhaps, it is no more than a fear of loosing the esteem of a friend, a relative or a spouse. Whichever fear it is, that's where the "nonsense" part of this article's title comes into play...because the fear is really a lack of knowledge of what to do, and how to do it.

Starting your own business is not really that much different from learning to fly an airplane, or undertaking any new endeavor. You decide that you want to be a locksmith. (Which most of you reading this have already done.) You then learn all you can about locksmithing...either by going to work as an apprentice in an established lockshop, or by taking a mail-order course, or attending a resident school of locksmithing.

Then you decide whether, or not, to start your own lockshop. Here again is where the "fear of flying" raises havoc with your nerves. Do you start part-time and build slowly, or do you risk everything by taking a second mortgage on the house, the kids, your mother-in-law; and jump in with both feet? Both methods have merit. Starting part-time will allow you more time to become better established before you "go for it." The second option allows you to start "full-time," provided you are well enough financed to keep paying your bills while you build your business.

Whichever option you exercise, you must realize that it is going to take you several years to get your business to the point where it is self-sufficient and profitable! The commitment to dedicate several years to developing a business before it becomes profitable is another fear many people experience Again, that fear is caused by a lack of knowledge of what to expect from your new business.

Now, the foregoing does not mean that you aren't going to make any money, or that you won't be able to pay your bills. What it does mean is, that for an indefinite period of time, you are going to be in a constant state of change, and growth. It means that during that period of time, much of the money you will "make" over, and above, your operating costs, will go right back into the business to finance it's continued growth.

That's called, "cost of growth." It's also known as "paying your dues."

One thing is certain, if you spend too much time dwelling on the negatives, or listening to what "they" say, you can work yourself into a state where the "fear" paralyzes you into doing nothing at all! What you *must* rely on is your knowledge, training, and instincts...you must SOLO! It is the only way to overcome your "fear of flying."

Besides, the absolute worst thing that is going to happen is that you are going to "crash-land." Unlike the student pilot, *you* are the one that will pick up the pieces. When you realize that only you have the power to influence your ability to "fly," you have taken a big step toward controlling, if not eliminating your "fear."

Whether you are thinking about starting your own locksmithing business, or have already taken that beginning step, the knowledge that you already have, plus the knowledge you *will* acquire, is what is going to carry your business through to successful profitability. That, and a tremendous amount of hard work! Both knowledge, and work are necessary (plus an abnormal amount of perseverance) to your businesses success. Either one, alone, will not be enough.

On March 4, 1933, Franklin D. Roosevelt, in his first inaugural address, said: "The only thing we have to fear, is fear itself..." My contention is, that if you are afraid, you are uncertain. If you are uncertain, you only need to acquire more information about starting your new business.

Many community colleges offer classes on starting new businesses. Frequently, your local Chamber of Commerce will offer seminars on business start-ups. Your local library should have an abundance of literature to help the beginning business. True, none of these sources will be locksmith oriented, but they will be "beginner" oriented.

Armed with your training in locksmithing, the knowledge that you may have about operating your own lockshop. Plus, your desire to *successfully* own and operate *your* own locksmithing enterprise (along with the aforementioned hard work), is what will convince you that your "fear of flying" is utter "nonsense!" §

Continued from page 76

30010-32009 MITSUBISHI

Keyblanks:
Silca MIT11R
Ilco X224
Curtis MT3

Code Machines:
1200 CM No. XF89

30010	30060	30110	30160	30210
10 23214143	60 0	10 54521414	60 52543214	10 34121212
11 32341232	61 23234523	11 14141234	61 54341434	11 32145254
12 21414525	62 23452541	12 54541212	62 14341254	12 12343412
13 23414525	63 14125414	13 0	63 0	13 45454125
14 14145212	64 25232345	14 52145434	64 0	14 41452525
15 41432123	65 0	15 0	65 45254125	15 34125214
16 12341434	66 14523212	16 0	66 41452341	16 43234525
17 45252541	67 21254121	17 43412125	67 25234523	17 0
18 52143252	68 52523234	18 34145252	68 34121432	18 43254541
19 21432341	69 41454123	19 32125452	69 0	19 45434541
20 54145452	70 34523252	20 0	70 41412523	20 14143252
21 12141432	71 23212525	21 54523214	71 32125412	21 23452123
22 21412523	72 23414143	22 21234125	72 14141452	22 0
23 21254123	73 12341414	23 32341454	73 54143212	23 0
24 34525252	74 0	24 32121412	74 0	24 0
25 54341454	75 23214123	25 0	75 12145412	25 14541432
26 14143432	76 25412541	26 52541232	76 34523254	26 43212523
27 0	77 45234521	27 14143452	77 25432141	27 41232523
28 14523234	78 25414323	28 43252123	78 34341412	28 0
29 34321412	79 14143232	29 14123434	79 54143452	29 14523414
30 32541252	80 41214143	30 41232321	80 34121234	30 43234521
31 14323414	81 0	31 0	81 43252541	31 34345414
32 54323252	82 52123412	32 54325212	82 14345254	32 23434143
33 0	83 25254543	33 21452525	83 43432525	33 41412143
34 41414323	84 23234141	34 52525414	84 12523212	34 41412325
35 0	85 12545254	35 41234121	85 21452521	35 54125232
36 54521452	86 25432541	36 0	86 52121232	36 54325252
37 43252521	87 0	37 0	87 0	37 0
38 32141212	88 0	38 32123414	88 34145254	38 54125454
39 23252343	89 34525214	39 0	89 41432523	39 21234145
40 21452323	90 23254521	40 23214525	90 0	40 34341254
41 23412143	91 41454523	41 45432341	91 43454541	41 32345452
42 0	92 34121454	42 34123454	92 14145232	42 23434125
43 23254125	93 25412323	43 54521252	93 41432141	43 45414543
44 52345454	94 25434525	44 34525232	94 21414123	44 25212143
45 34541232	95 0	45 43254523	95 32341212	45 23412541
46 0	96 32521414	46 0	96 32541432	46 32541234
47 0	97 0	47 41454345	97 0	47 0
48 52345434	98 34523432	48 0	98 32543452	48 12145254
49 25212343	99 0	49 23412345	99 52145452	49 0
50 0	00 52145414	50 43234121	00 32343252	50 45254143
51 12341254	01 14343412	51 45254523	01 25452523	51 21252145
52 52123252	02 34143252	52 14541214	02 43414545	52 52323212
53 25452543	03 25212345	53 41232325	03 54523232	53 34523412
54 0	04 32321252	54 34143254	04 12343452	54 14541434
55 52523414	05 45452523	55 14143214	05 0	55 25454121
56 54123432	06 12543414	56 54123414	06 25412321	56 41212321
57 0	07 52343414	57 0	07 41252521	57 54123214
58 54541214	08 34341454	58 12141454	08 0	58 34143232
59 32141412	09 25434541	59 43452121	09 52141254	59 41232541

30010-32009 MITSUBISHI

Keyblanks:
Silca MIT11R
Ilco X224
Curtis MT3

Code Machines:
1200 CM No. XF89

30260	30310	30360	30410	30460
60 43232523	10 45212525	60 41232521	10 21434143	60 25412141
61 23252543	11 25234543	61 52321414	11 34141212	61 52343412
62 32525214	12 0	62 52543252	12 21232141	62 0
63 23434541	13 0	63 0	13 0	63 54341432
64 23434123	14 41252343	64 23412521	14 0	64 14325232
65 52125232	15 0	65 45454121	15 54143234	65 41452345
66 43452125	16 21254125	66 14125212	16 12145234	66 41234323
67 25414341	17 34525234	67 0	17 32521254	67 12123412
68 14521452	18 23454125	68 41234345	18 45214543	68 52521234
69 43454121	19 45252523	69 12543252	19 0	69 0
70 45414345	20 0	70 25452345	20 0	70 43254143
71 25412325	21 23234145	71 0	21 12523214	71 0
72 54541234	22 45254541	72 21412145	22 12125214	72 32523412
73 52525214	23 12325234	73 0	23 25214343	73 25214521
74 23454143	24 23252141	74 43432341	24 0	74 23412121
75 12521232	25 0	75 45412521	25 0	75 54143252
76 14125254	26 0	76 0	26 34525452	76 54145212
77 41432341	27 32141254	77 34341252	27 14523452	77 43412541
78 12125412	28 45214541	78 52121454	28 0	78 54341412
79 21412545	29 0	79 45214521	29 41234141	79 54125434
80 25452341	30 0	80 43234123	30 52121452	80 54141252
81 34141452	31 0	81 0	31 54141232	81 52321254
82 54143214	32 52541454	82 41432125	32 34121412	82 21432523
83 52321452	33 0	83 54523414	33 41454125	83 32345252
84 12345414	34 0	84 41232141	34 45254145	84 41254543
85 52343212	35 21414145	85 41234145	35 43254145	85 54143454
86 41212143	36 43414345	86 12145414	36 54521232	86 0
87 25414145	37 25232341	87 52121254	37 12341252	87 25412545
88 52141432	38 52343234	88 43412523	38 0	88 12525214
89 45414523	39 14523254	89 32145414	39 41432543	89 0
90 0	40 21434125	90 54125452	40 41454323	90 14341252
91 52523432	41 34145454	91 21452123	41 0	91 45232521
92 21452341	42 23412323	92 43412141	42 12343252	92 23234125
93 34145234	43 23414343	93 14345232	43 41432343	93 54325414
94 32341234	44 52345252	94 32525412	44 45232141	94 45254121
95 43252141	45 23412525	95 23254341	45 0	95 52143214
96 14321252	46 0	96 0	46 21232521	96 0
97 45452125	47 14521212	97 0	47 0	97 0
98 12541212	48 21452545	98 25232125	48 21412325	98 52541252
99 0	49 41234523	99 14541254	49 0	99 23252321
00 41254523	50 25252341	00 34521434	50 54125252	00 0
01 21252545	51 45252121	01 45214121	51 34343412	01 23234341
02 21212541	52 45452121	02 25214121	52 0	02 32143412
03 0	53 0	03 32345414	53 14121452	03 0
04 0	54 43452541	04 0	54 0	04 45212121
05 0	55 54345214	05 0	55 12125414	05 14525434
06 21452141	56 0	06 14541212	56 14521234	06 25214541
07 52321212	57 52545232	07 34521232	57 0	07 23214125
08 41252123	58 52341452	08 0	58 25214341	08 25232521
09 52545234	59 52541434	09 23254541	59 12325412	09 0

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30010-32009 MITSUBISHI

Keyblanks:
Silca MIT11R
Ilco X224
Curtis MT3

Code Machines:
1200 CM No. XF89

30510	30560	30610	30660	30710
10 25234541	60 45212325	10 0	60 0	10 14521434
11 54545412	61 34545412	11 12341452	61 0	11 45232323
12 41234545	62 0	12 21454125	62 43252145	12 34325452
13 0	63 52321214	13 0	63 52341434	13 0
14 45454523	64 12525414	14 45214325	64 41414523	14 34125252
15 14541412	65 52123434	15 14521432	65 0	15 12341412
16 45232541	66 0	16 52543212	66 43212141	16 52145214
17 34125234	67 41414525	17 41212341	67 54125414	17 32521454
18 0	68 34525254	18 41452143	68 34121214	18 21414125
19 0	69 14521414	19 32325234	69 25214543	19 54125254
20 54523254	70 43252325	20 45214141	70 32521452	20 12123452
21 45414321	71 52525434	21 23432525	71 12321452	21 52123452
22 43234125	72 32545232	22 12541412	72 41232321	22 0
23 0	73 21414521	23 52323412	73 34523234	23 21434541
24 14545214	74 45254123	24 21414343	74 34143412	24 43214125
25 0	75 0	25 52341412	75 23234143	25 0
26 25234345	76 43252345	26 23432341	76 0	26 32341254
27 34123412	77 25252143	27 52145252	77 21434525	27 12141434
28 0	78 34523232	28 32521412	78 21452143	28 41212343
29 21434521	79 21454141	29 0	79 34521212	29 34345212
30 25412345	80 45212521	30 0	80 43414123	30 12341232
31 0	81 14545232	31 45452343	81 52341252	31 12345254
32 34525432	82 32345232	32 21234141	82 45234341	32 0
33 0	83 32523452	33 25454541	83 43214145	33 52523412
34 32541412	84 32543414	34 52143232	84 52143452	34 0
35 0	85 41214545	35 23454121	85 12341212	35 34523414
36 54121434	86 0	36 34543414	86 25252141	36 52341254
37 34521252	87 34121252	37 43434145	87 52545414	37 14141252
38 12323252	88 25412143	38 0	88 54123212	38 12125234
39 0	89 0	39 0	89 32145214	39 0
40 12523414	90 41214521	40 0	90 52341414	40 0
41 43454125	91 0	41 45212125	91 0	41 43412343
42 45212541	92 23214541	42 54543252	92 0	42 52325234
43 21414523	93 34525454	43 0	93 25234323	43 45412143
44 23214121	94 0	44 45254521	94 21452321	44 45412525
45 43232521	95 34543252	45 52345214	95 0	45 43432521
46 14341214	96 23412123	46 32541434	96 0	46 34145452
47 0	97 34521214	47 34145434	97 14123454	47 32321412
48 12141234	98 54523452	48 45234543	98 12541414	48 34125434
49 0	99 54145214	49 45434525	99 41212323	49 45412141
50 45452141	00 43252343	50 54125212	00 25452141	50 25252345
51 54523434	01 0	51 0	01 43252523	51 0
52 23454521	02 34123432	52 34323412	02 45214341	52 14125234
53 0	03 52345254	53 54121234	03 34143214	53 52545432
54 12523252	04 0	54 25254341	04 34141432	54 12141452
55 43412341	05 54525414	55 45452325	05 25232321	55 45414125
56 52523434	06 0	56 52145232	06 23434523	56 25454341
57 23414521	07 0	57 0	07 23432523	57 54525232
58 45232145	08 52323452	58 23252123	08 52121434	58 41254345
59 43412525	09 12323414	59 34145412	09 12525452	59 52343254

30010-32009 MITSUBISHI

Keyblanks:
Silca MIT11R
Ilco X224
Curtis MT3

Code Machines:
1200 CM No. XF89

30760		30810		30860		30910		30960	
60	0	10	21434121	60	0	10	52521412	60	0
61	25234125	11	52141434	61	41452321	11	52521232	61	45234125
62	32143252	12	25234521	62	12345252	12	52543432	62	0
63	23234123	13	45412343	63	54543414	13	54345452	63	32325212
64	41232543	14	21234121	64	0	14	14543452	64	0
65	43412543	15	32521252	65	0	15	54341232	65	21234143
66	54345234	16	21412123	66	0	16	45232343	66	32541454
67	52343252	17	12125232	67	0	17	12321252	67	34141252
68	34541452	18	14523232	68	43452545	18	54121454	68	0
69	0	19	0	69	52143412	19	0	69	43232341
70	45432525	20	14341412	70	32143452	20	32543412	70	0
71	21234541	21	0	71	43454143	21	12145214	71	23454523
72	0	22	14541232	72	45212323	22	0	72	14125434
73	23254525	23	45254345	73	0	23	23212341	73	0
74	0	24	25234525	74	0	24	0	74	32141214
75	32343452	25	34123254	75	21412323	25	0	75	32343414
76	34521234	26	0	76	43454521	26	54121212	76	45434143
77	23452141	27	14145412	77	21434123	27	12523254	77	54123434
78	0	28	41412343	78	21452345	28	41254123	78	43434125
79	21452523	29	25412123	79	43214525	29	52341214	79	12345234
80	12543452	30	14141432	80	41232341	30	25452123	80	0
81	52123212	31	34521412	81	41414345	31	34541434	81	0
82	41214125	32	41234541	82	0	32	23214341	82	12145232
83	45432521	33	0	83	45232143	33	45412145	83	23232141
84	0	34	45412523	84	34523214	34	34325234	84	41252145
85	41434545	35	25254523	85	25232145	35	52541414	85	25414345
86	0	36	41454525	86	14123212	36	25452323	86	0
87	23452145	37	25434341	87	41234125	37	25254325	87	34541254
88	52123414	38	43452321	88	32343412	38	34143212	88	14145432
89	14143254	39	32345214	89	14325212	39	41434345	89	41432143
90	12123414	40	21414323	90	43414323	40	25434121	90	23434145
91	41452343	41	32325254	91	0	41	52141252	91	34123452
92	23452143	42	41254545	92	41434525	42	52321234	92	0
93	25232121	43	45454341	93	0	43	21252541	93	23452325
94	12541214	44	45432523	94	0	44	34141234	94	32123252
95	52125414	45	34141454	95	43254141	45	0	95	0
96	25452541	46	54525212	96	0	46	25414125	96	43412123
97	21214521	47	52543434	97	43214341	47	54121414	97	0
98	52541432	48	41212325	98	45232125	48	0	98	41452541
99	25214345	49	23452345	99	25254123	49	0	99	23252521
00	34121434	50	52321252	00	34325254	50	52345232	00	52323432
01	0	51	34321452	01	0	51	54523234	01	0
02	21412341	52	41254521	02	34145432	52	14543414	02	41232143
03	0	53	32321414	03	41414325	53	32125414	03	32545412
04	43254525	54	0	04	52145432	54	0	04	14121252
05	12141232	55	25212523	05	0	55	0	05	23254121
06	25434145	56	45214343	06	25214525	56	0	06	41412345
07	25212325	57	34541214	07	34345452	57	25214321	07	34145414
08	41254121	58	41252141	08	41434145	58	34325414	08	23452521
09	12143412	59	34345412	09	32521212	59	43212341	09	52123232

Bits & Pieces

Informative Tidbits For The Security Industry

Tom Seroogy

This is just FYI. (For Your Information.) Saturn is recalling the 1991 and 1992 SC and 1993 SC2 two door models due to a security problem with the trunk lock. Apparently the trunks can be opened with a simple "pop" just below the trunk lock, without damage to the lock or car body.

Currently, new lock and linkage parts are being shipped to the Saturn dealers for making the necessary changes. Until then customers and dealers are told to temporarily disable the trunk lock mechanism by removing the linkage and telling customers to use the remote release lever located inside the vehicle.

****

A misprint in the January issue of Bits & Pieces gave the Borroughs MATS tool number as #9002B. The actual number is BT9202, and is an entire kit designed to service the new GM column design used on the 1992, 1993 B body cars and the 1993 full sized trucks. MATS employs several changes to the GM tilt column including an ignition cylinder with a stronger sidebar, reinforcement around the sector gear area of the column, and a steel cover over the steering wheel lock plate and steering wheel lock plate pin.

In order to get down into the column it is necessary to remove the guard plate over the steering wheel lock plate. This is held in place by two torx screws found below the steering wheel lock plate. In order to get to these screws out it is necessary to align the slots in the lock plate with the screws and the screw access holes in the guard plate. If a key is not available, as is the case with most locksmith situations, the lock plate cannot be turned to gain access to the screws.

The specially designed MATS tools allow the locksmith to depress the lock plate pin and rotate the locking plate to facilitate removal and complete column tear down. These tools with instructions are available from Borroughs tools, 800-253-0138.

****

The new Titan hardware line by Kwikset uses a six pin key. The key blade profile and specifications are identical to the standard five pin blank Kwikset has always used. The sixth cut was added by placing an additional cut between the shoulder and the first cut. Shoulder to the first cut is .097"; and cut to cut is the Kwikset standard .150". Depths also remain the same.(*See illustration 1.*)

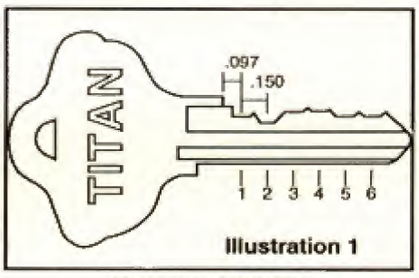

Illustration 1

****

The Saab AC2001 — 3192 which ran in the January 1993 issue are printed as they came from Saab. These codes run tip to bow and not bow to tip.

****

JET has released a new key blank, the M5 to fit the Master brand locks that uses their 81KM keyway. The M4 will operate locks with Master's 81KR keyway. For locksmiths who use key punches, the "UNIBOW" (neuterbow) series five pin SC1 Schlage keyway, a bottom shoulder has been added. JET is also offering several of the most popular keyways in their "NEUTERBOW" (formerly HPC) series in a brass version with no custom coining other than "DO NOT DUPLICATE."

****

In the February *Bits & Pieces* column, we mistakenly mentioned that the new XF60 card for the 1200 CM is for the new 1993 Chrysler J0001–J3580 code series. That new card number is actually X60. XF60 is for Datsun.

****

March releases by Auto Security Products: Lexus pinning kit #A30-110, Corolla wagon pinning kit #A30-109, and facecaps for 1991 Honda Accord door locks #P19-215.

****

Curtis Industries has released a new keyblank and carriage for the 1993 Cavalier style ignition. The keyblank is B84 and the carriage is GM4B, part #20599. This carriage will work with both the old and new style Cavalier style blanks. The cam has remained unchanged.

****

Silca has these new keyblank releases: GM30 and GM 30AP (plastic head) for the 1992 Geo Prizm now using the 1982 Camry style lock; the TOY46R and TOY 46RP (plastic head) for the 1992 Toyota Corolla wagon using the new "N" series codes; the Mit 11R and Mit 12R (valet) for the 1992 Mitsubishi 30010-32009 code series.

****

R&D Tool Company has a new .003" thick spring compressor to replace one of the .012 spring compressors. This tool is used on the VATS ignitions. The new compressor eliminates the need to widen the "A" keyway and is now included with all GM Picksets. Previous GM Pickset

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The Lighter Side

What If...?

by Sara Probasco

Have you ever said to yourself, "If only I had done this or not done that, things might be very different today!"? Recently, Don and I were speculating in this frame of mind, contemplating the directions our lives might have taken if we had chosen differently at various points in our past.

"I've often wondered what would have happened if I'd taken Doris Pringle to the senior prom, like Mom wanted me to," Don said.

"Who's Doris Pringle?" I asked.

"This mousy little bookworm who bailed me out of trigonometry. She had a terrific crush on me," he said, straightening his shoulders a bit as the memory brought a smile to his lips. "Came over two or three evenings a week to tutor me. Mom thought I owed it to her to take her to the prom. But, man, she was ugly." His eyes glazed over. "Who would've guessed she'd turn out to be another Raquel Welch!"

"You're kidding!"

"And a best-selling novelist, besides. You've heard of Danielle Steele."

"You went to school with Danielle Steele?" I asked, incredulous.

"Well, not exactly. But Doris is right up there in that same category."

"I've never heard of Doris Pringle. She must use a pen name, " I said.

He nodded. "Ralph Twillby. "

"Her pseudonym is Ralph Twillby?"

Don nodded. "He's the reigning queen of the gothic western spy novel. Maybe I should say 'she' s the reigning king'."

"Either way, it sounds like a pretty narrow field," I replied. "What made you think of her, after all these years?"

"Yesterday, I got a letter about our upcoming class reunion. It told about some of our classmates who have made names for themselves, and Doris happened to be mentioned."

"Well, I think that's wonderful. Tell me some of her book titles. I'd like to read at least one before I meet her."

"Meet her? "

"At your reunion. "

"Oh, I doubt she'll be attending. The letter said she's doing ten-to-twenty for armed robbery. Seems she tried to hold up an Amtrak in Phoenix last year. On horseback. Dressed as a French courtesan. She must have gotten a little carried away in her research."

"No doubt."

As Don's attention returned to his morning paper, my imagination wandered from Doris's ill-fated research to my own writing and on.

What if Don had never become a locksmith, I wondered. What if he had continued in drapery manufacturing, instead? No doubt, we would still be living in Lubbock, Texas. The people of rural Floyd County might never have known the joys of having a resident locksmith in their midst for those six years we were there; the man who chose to fill the gap when we left might never have had the courage to do so, without our breaking ground for him; the citizens there might still be bashing out windows with bricks to get into their cars and buildings.

I would never have been published in locksmith magazines, or been key-note speaker at various locksmith conventions, or taught locksmith business seminars all across the country.

If Don had never become a locksmith, we would not have moved to Uvalde. Area builders and contractors might still be driving to San Antonio for their entry hardware, the local police would be trying to open the new vehicles with Slim Jims or whatever else they could find, and the people here might be without a professional to call about their security needs. Suddenly, I felt very necessary.

I began to think of people all over the world whom we had come to know through the locksmith industry and of deep friendships we had made locally, as a result of our business. Our life would not be the same today, if Don had chosen differently, twelve years ago. It was as if I'd stepped into my own different version of *It's A Wonderful Life.*

"You know, Honey," I said to the newspaper that separated us, "it's difficult to imagine what life would be like if we had made other choices along the way. Just think, back in '75, when I lived in Mississippi, if I hadn't filled in at the last minute for an ailing business associate who was booked at San Antonio's Mexfair, and if you hadn't done the same sort of thing from your end in Lubbock, we might never have even met."

"That's right," Don said.

"What do you suppose you'd be doing today if we had never married?" As Don lowered the newspaper, I tried to ignore the far away look in his eyes and the slow smile that spread across his face. "Seriously, can you imagine life without me? Don? Don?" He seemed to be in Never-Never Land.

I heard a low chuckle. Don's eyes seemed to be viewing scenes beyond my realm of vision.

"What's so funny?" I asked.

"What? Oh, I was thinking how everybody used to tell Doris their troubles. She was such a good listener. Besides, they figured their secrets were safe with her. She had no friends to pass the gossip along to." He chuckled again. "I wonder how many torrid incidents in her books can be attributed to those shared experiences of our various classmates."

"Wouldn't you love to be able to go back, knowing what you know now, and re-live some of those times?"

Don roared with laughter. "I wonder what my mother would have done if I'd told her I was taking Ralph Twillby to the senior prom!" §

Beginner's Corner

Potpourri

by Eugene Gentry

Some people will go to great lengths to open a padlock, house, or car before they will call a locksmith. They will damage a lock or door, and when all efforts fail, some one in the crowd that has gathered to help will say, " Why don't you call a locksmith."

This was brought to my attention again last night when a call came to open a Master padlock on a locker at a health facility.

A lady had locked her purse, with the key in it, in the locker, and a maintenance man had worked on it for an hour and couldn't get it open. The lady was about to call her husband to bring a hacksaw, when my daughter, Carol, who works there, happened on the scene. Carol told her she should call a locksmith and the lady said, "I didn't even think of that."

Well, when I got there, I found the maintenance man had been pounding on the lock with a hammer. He had damaged the locker latch by prying and had damaged the hinges trying to take them off. It was a shame as the lockers looked almost new.

At a Mini Storage, two men had worked over two hours trying to open a Discus round padlock before they called me. They had managed to bend up the case with a hammer and had made some cuts in it with a hacksaw. I drilled out the cylinder but the lock would not open. The shackle on the Discus slides back into the case but this lock was so damaged the shackle would not slide. I tried to pound the lock back into shape but it still would not open. That incident cost the men a lot of money, as they had to pay me for my time. The last option was to remove the entire latch and install a new one.

These, and other incidents lead me to believe that people don't think of a locksmith right away when they are locked out. The first thing they look for is a coat hanger, hammer or screw driver to open the lock. I suppose some people may be trying to save money, but on the other hand, many people do not know what a locksmith does. They do not know that he can make keys and make emergency openings.

So, locksmiths, get your business cards out there and let people know what you can do.

Along a different vein of thought, I had been installing deadlocks without trouble until I got ready to install a Weslock deadlock for an elderly widow. I had drilled a hole for a 2-3/8" backset, and the 1" hole for the latch. Everything went well until I set the latch in place and it protruded out of the hole about 3/4". The first thing I thought of was "Oops", I should have drilled a 2-3/4" backset hole. Lacking time to figure it out, I installed a familiar Kwikset dead lock.

When I got home, I measured the Weslock and found that the 2-3/8" backset was correct. Then why didn't the latch fit? Because the rear of the latch extends farther back than other deadlock latches do. I confirmed this with a call to another locksmith, who said that when you drill the 1" hole in the edge of the door for the latch, you have to keep on drilling to the other side of the door hole to accommodate the longer latch.

One last thought. I stopped by the key duplicating booth of Home Depot, a large home improvement store, and glanced at their key machine. One tooth was missing in the cutting wheel. Wonder if this affected their key cutting ability? §

Technitips

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be opened by this "feeler" method, especially when a scope is not able to see around the straight-in fence. Because the drive cam is at the front of the lock case, drilling into the front of the lock case is not practical. Use the feeler to align the gates from the back to the front. Remove the feeler and rotate the bolt handle to open the safe.

This method does not risk damage to the lock case or wheel pack, like drilling into the case would. Repair or replace the dial ring and plug the door to complete the opening. Because we drilled into the dial ring, the door paint work was not damaged. This eliminates trying to match the original paint of the safe.

Oh, and by the way, after drilling open the safe, I found the combination to be 25-50-25. I should have taken a few more minutes to run a few trial combinations before reaching for the drill.

Bill O'Dwyer
Connecticut

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Treskat

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to quit. That's all, easy and fast.

A nice feature of Treskat's programs is that they can be run without copy protection. Simply put, there is no need for adding an adapter to the computer in order for the program to run.

Running the program was equally easy. Having installed it onto a hard drive, entering CM at the prompt brought us right into the program displaying the index of files and option keys.

At first we simply scrolled through the index using the up and down arrows or the up and down page keys. There are currently 13 files of codes that contain most of what the locksmith needs including current padlock, toolbox, file cabinet and auto codes. Every year a message appears informing the user to update the files. Again, installing the updates simply requires inserting the disc and entering "install".

Following the KISS principle, there are only four options. Hitting the F1 key allowed us to view update information for missing files. The F4 key brought us to the printing options. The F5 key searched for codes. And the F8 key exited the program.

By far the most used function is the search for codes. This can be done two ways. Scrolling through the index, you can hit the "enter" key after finding the series you want. A window will pop up asking for the number you want within that series. Or, instead of wasting the time scrolling the index, hit the F5 key.

After we hit the F5 key we were prompted to enter the code number. Doing so gave us a pop up window with all the critical information: the code number, bitting, various keyblanks, where the cutting is gauged from, Framon starting specifications and HPC 1200 code card number, what the primary use of this codes series is (e.g. office furniture, tool boxes, foreign auto, etc.), spacing and depth, and relevant notes. A nice addition to CodeMaster is that the user can enter his own comments. This is especially useful in situations where there is constant change (auto for example).

The only disadvantage seen with CodeMaster was the inability to call up information by manufacturer. But because this option is not commonly needed, the simplicity of operation outweighed this single drawback.

From a locksmith's perspective CodeMaster was easy and it was fast. It may not soon replace actual code books, but it sure is handy.

CodeMaster is economically priced. Other Treskat software includes PerfectMaster 4.1, a masterkey program, AutoMaster, an encyclopedia of domestic and foreign auto information, and more. For more information on these and other packages or a free demo disk, contact: Treskat USA, 800-645-5657, or outside US call, 407-870-9696. §

GSA Safe

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more respect for these antique locks than for newer repairable/replaceable units.

I tried manipulation, but the dial turned too hard and hung up in two places. It had not been serviced or opened in about 20 years. That was the newest date on the papers and letters inside this government issue GSA TL-20 rated unit.

In the old days, I drilled these units, transferred the numbers and eventually dialed the safe lock open. The usual time took about 1 hour if everything went right.

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Instead of drilling and transferring, I opted to drill and punch the cam. There would have to be outside repairs, and I chose to take the EASY way, as opposed to the more technical way. Cam punching is easy if you do it without the customer watching too closely. Measurements will not be given here. All one has to do is to measure to the end of the combination lock bolt from the dial center, and then move up, down, right or left of the bolt. There after a hole is drilled, a punch is inserted, hit a couple of times, and then the safe is opened.

On this particular Mosler, I measured over a few inches, and drilled 5/8" above the centerline. This put me exactly on the tip of the drive cam. (*See illustration 1.*) A few hits with a large hammer bent the cam out enough for it to bypass the extended combination lock bolt. The opening, including drilling a 1/4" hole through the hardplate, took about 10 minutes.

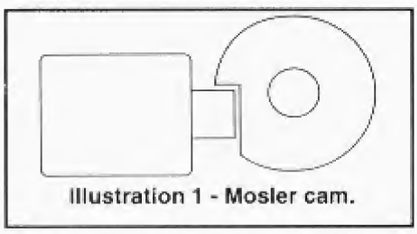

Illustration 1 - Mosler cam.

I could not believe how hard I used to have to work to get these safes open. Cam punching works. Even on newer Mosler safes, this method is viable, but repairs are visible. The other brand of safe that easily succumbs to cam manipulation is Meilink type safes. With these, the cam is below the centerline and the hole must be drilled appropriately and at the correct distance. (*See illustration 2.*)

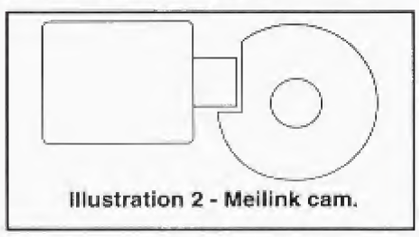

Illustration 2 - Meilink cam.

Repairs on this Mosler safe was quick and easy. I drove in a hardened taper pin that seated in the hardplate. I proceeded to hammer the cam plate back to its former position while still installed on the safe.

I then ground the taper pin flat to the safe door and touched it up with a (Mosler) green permanent marker. The repair was almost invisible. I also took

the key change lock apart and cleaned, lubed, and adjusted the inside components.

On a Meilink safe, the repair can be effected with a pop rivet. On some of the wall units that use this configuration, the cam does not have to be punched. It can be pushed back gently with a drift punch, and re-bent easily. This sure beats cleaning out the inside of the lock case and making sure no internal combination lock parts have been damaged.

Cam punching is a viable way to quickly and easily open some safes. A word of warning, however. There are some safe manufacturers that guard against cam punching with relocking devices that can be activated by this simple procedure. Many MAJOR Safes use a relocking plate that will activate a relocking device if the cam is punched. Punch, Open, and Prosper! §

Bits & Pieces

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customers can receive a free replacement with instructions by sending a self-addressed, stamped envelope to: R&D Tool company, 7705 RC Gorman Ave. NE, Albuquerque, NM 87122.

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Despite being told different, it is, in fact, true that the 1990 Corvette VATS sytem does have a progressive time delay system. This has been confirmed by Corvette engineer Gordon Killabrew and demonstrated by locksmith Tom Mazzone of Mazzone Lock and Key, Streamwood, IL.

Killabrew states that the VATS time delay is three minutes after each of the first three incorrect keys, and 10 minutes delay time for each incorrect key thereafter. This particular VATS modification is on 1990 only.

Mazzone ran into trouble while working on the Corvette of Cub's first baseman, Mark Grace. He contacted another publication that insisted such a system did not exist. Not satisfied, Mazzone persued it through his contacts in the auto field. Upon contacting Killabrew, he was informed that the delay difference in the 1990 Corvette was never published information because it concerned so few vehicles.

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Safe Tools

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cutout in the underside of the bolt.

Just as with the LaGard, use tool NST-D to align the wheels first. Then, if the relocker is the older type, use tool NST-B to get behind the washer, hold it down and push it back. When this is done, use tool NST-D to retract the lever.

If the relocker trigger is the newer type, use tool NST-C after you have aligned the gates with NST-D. It is usually considerably more difficult to defeat the older style S&G relocker trigger than it is the LaGard or newer style S&G type.

Tool NST-F is used first on the Mosler MR/MRK 302/402 lock. Use this tool to lift the lever up out of the way so you can insert tool NST-E. When the back cover is pushed off of one of these Mosler locks the wheel pack goes with it. That allows the lever to drop down in the way but it also means you do not have any gates to align.

With the lever being held up out of the way, insert tool NST-E. Turn it according to the handing of the lock and find the spring-loaded relocker trigger button. Pull back on the tool to depress the button, then turn tool NST-F to retract the lever.

HPC recently improved tool NST-E by making the swing-away arm of much stronger material. Some locksmiths were bending the arm when the tool was pulled back with too much force. With the harder metal and a slightly larger rivet the tool is now much stronger and should prove equal even to those locksmiths who tend to be a bit on the heavy-handed side.

Use of these tools makes opening vandalized safes much easier. As with any tool, however, if you want it to work right when you need to use it you need to learn how to use it ahead of time.

Use a safe that you have in stock or even just a lock on a mount to practice with these tools. Use them where you can see what happens when they are inserted. Some locksmiths make their own special alignment marks on some of the tools so that when they get out on the job their work is easier.

Knowing how the lock is handed on the safe that you need to open will help you also. By keeping information on safes that you service you will develop a file of invaluable information. Then, by using tools such as these NST-6 tools from HPC, your safe work will become more professional and less strenuous. §